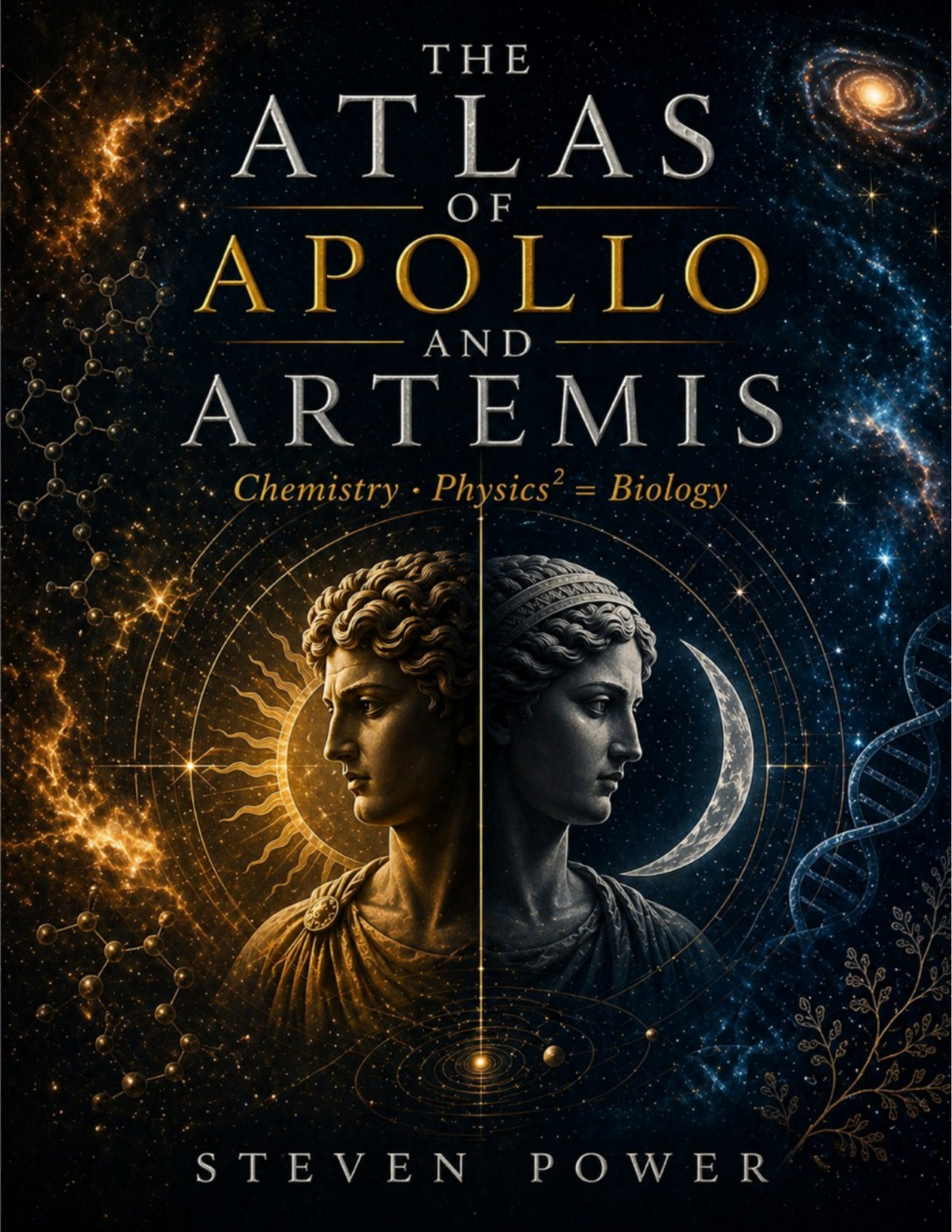
THE ATLAS OF APOLLO AND ARTEMIS

Chemistry · Physics^2 = Biology



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Steven Randall Power

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Preface

A dialectic exists between the quantum mechanical approach to physics and Einstein's dimension-space approach to physics. To date, the quantum mechanical approach has held the great sway; we have literally built our understanding of modern chemistry, biology and pharmacology on its underpinnings.

To the quantum mechanist, it appears the dimension-space approach has been of little consequence. However, we must remember the proofs for Einstein's dimension-space mechanics are found in Maxwell's equations, and Maxwell's equations have been the workhorse of modern industry. These equations are key in building the tools the quantum physicist, chemist, biologist and medical physician takes for granted.

This book will expand the dimension-space approach to the sciences into a classification system. It will show how the future growth of the modern scientific world may benefit by the ascendency of the Einsteinium model. It will push the logistics of Maxwell's equations into areas the quantum scientist considers taboo. It will suggest a more balanced view of the scientific world must be professed.

Many will argue this book is not how "good science" is done. They are right: This book uses the other side of the dialectic. It uses the deductive logic of mathematics more so then the inductive logic of observation. It looks at the world as if it is a mechanical entity. By doing so, it tries to open new doors. It is how "good engineering" is begun.

Notes

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Notes

Chapter 1

Studies in Dimension Space

1.1 Premise

In theoretical science, the predominate form of the $a = z\phi^2$ ternary equation is Einstein's cosmic equation $E = MC^2$. Simplifying the equation's variables into geometric forms, we arrive at the equation...

$$4s = 3d\left(\frac{\Delta 3d}{4s}\right)^2 \tag{1.1}$$

...where $3d$ represents a bounded three dimension displacement, a scalar, 4s represents an unbounded four space, and $\Delta 3d/4s$ represents the change of the $3d$ entity in the four space. In terms of a geometric model, Mass may be considered as a sphere, and its expansion as the $\Delta 3d/4s$ value, and $4s$, four-space, energy as its product.

In the expansion of a 3d object in four space, the $\Delta 3d/4s$ variable is in an unique mathematical position to establish the coordinate system. The expansion of the sphere is describable geometrically by using two orthogonal planes (xy, xz). It follows the value $\Delta 3d/4s$ can be viewed spatially as a type of vector where the cross-product definition, $\Delta 3d/4s \times \Delta 3d/4s$, establishes the two planes of a natural coordinate system.

The establishment of the vector uniqueness in the exponential variable is the mathematical subtlety which allows physical particles to be created. Conservation of energy is preserved as each of

the two particle equations use a discrete geometric portion of the ϕ^2 variable. One part becomes a reduction equation and the other becomes an induction equation...

$$4s \div \left(\frac{\Delta 3d}{4s} \downarrow\right) = 3d \left(\frac{\Delta 3d}{4s} \uparrow\right) \tag{1.2}$$

The idea is easier to see if we simplify the model. Consider the equation ...

$$3s = 2d \left(\frac{\Delta 2d}{3s}\right)^2 \tag{1.3}$$

Here, we have dropped the dimension by one unit and the representative model is now a bounded plane, spinning on its axes. The $2d$ value represents the plane, the $\Delta 2d/3s$ variable represents the rotation of the plane, and $3s$ represents the unbounded three space this movement creates. The key here is the bounded plane has two orthogonal axes on which to rotate, any combination of which can describe any movement as it creates a 3space. Taken individually, each orthogonal axis allows for the formation of a particle equation...

$$3s \div \left(\frac{\Delta 2d}{3s} \downarrow\right) = 2d \left(\frac{\Delta 2d}{3s} \uparrow\right) \tag{1.4}$$

Using the method we have developed, we may drop the model by another dimension...

$$2s = 1d \left(\frac{\Delta 1d}{2s}\right)^2 \tag{1.5}$$

In this example, the equation represents a line rotating in a plane. Obviously there are two directions this line can rotate to create a plane, and hence we are once again lead to viewing the ϕ^2 symbol as being a geometrically constrained vector based cross product. Note how the geometric constraints works: In 2-space, the $\phi \times \phi$ argument refers to the condition where maximum value exists when both directions of rotation (spin) exist. This subtlety allows for spin orientation of the breakout particles...

$$2s \div \left(\frac{\Delta 1d}{2s} \downarrow\right) = 1d \left(\frac{\Delta 1d}{2s} \uparrow\right) \tag{1.6}$$

Another interesting point can be made of the $1d \rightarrow 2s$ geometric model: The model does not exist until the line completes an arc,

and this indicates a discrete quantity of energy is required to engage the equation. This argument continues up the ladder to the $\Delta 3d/4s$ variable. We know the $3d$ in $4s$ variable represents a discrete the maximum quantity, the speed of light. It follows the $\Delta 1d/2s$ is in someway representative of a discrete minimum quantity, e.g., Planck's constant.

1.2 Geometry

The next question to answer is how do we link these three geometric equations together to establish an energy system where the rotating line first creates the plane, the plane then creates a sphere, and the sphere then expands through time. First, to achieve a semblance of $3d$, we multiply the $2s$ plane equation (x, y) to the $3s$ equation (x, y, z). This induction equation creates an xyz particle entity, provided the two equations share the same (x, y) variables. Conversely, we take the four variables of the $4s$ equation (x, y, z, t) and divide out the single variable actually being contributed by the $3s$ equation. This reduction equation leaves us with a xyt particle entity. Consider this macroscopic equation ...

$$\left(2s = 1d\left(\frac{\Delta 1d}{2s}\right)^2\right) \bullet \left(3s = 2d\left(\frac{\Delta 2d}{3s}\right)^2\right) = V_1 \tag{1.7}$$

$$V_2 = \left(4s = 3d\left(\frac{\Delta 3d}{4s}\right)^2\right) \div \left(3s = 2d\left(\frac{\Delta 2d}{3s}\right)^2\right) \tag{1.8}$$

When these two equations are amalgamated into one, we are back to the ternary form (assuming conservation of energy, $xyz = xyt$)...

$$\left(2s = 1d\left(\frac{\Delta 1d}{2s}\right)^2\right) \bullet \left(3s = 2d\left(\frac{\Delta 2d}{3s}\right)^2\right)^2 = \left(4s = 3d\left(\frac{\Delta 3d}{4s}\right)^2\right) \tag{1.9}$$

A very important note on this equation is the need to share variables to establish the mechanical system. Consider how mass, which we defined as a $3d$ scalar may also be described vectorially as $\Delta 2d/3s$ entity. The $3d$ value is the bounded scalar definition (x, y, z) of mass, and the $\Delta 2d/3s$ is the vector definition $(x, y, \Delta z)$ of mass. In solving, we must choose whether we want to solve for bounded scalar or vector-particle values. As such, the mathematics embodies the Heisenberg Uncertainty Principle.

1.3 Expansion

When our $1d \rightarrow 2s$ line is creating a two space, something quite exciting is occurring orthogonal to it. To understand what this is we must expand the equation set. This is achieved by using the method established above. First we move the geometric definitions up or down one value to create two more large equations, and then we unify them into a very large equation. The resulting equation system is...

$$\left(\left(1s = 0d\left(\frac{\Delta 0d}{1s}\right)^2\right)\left(2s = 1d\left(\frac{\Delta 1d}{2s}\right)^2\right)^2 = \left(3s = 2d\left(\frac{\Delta 2d}{3s}\right)^2\right)\right) \bullet \tag{1.10}$$

$$\left(\left(2s = 1d\left(\frac{\Delta 1d}{2s}\right)^2\right)\left(3s = 2d\left(\frac{\Delta 2d}{3s}\right)^2\right)^2 = \left(4s = 3d\left(\frac{\Delta 3d}{4s}\right)^2\right)\right)^2 = \tag{1.11}$$

$$\left(\left(3s = 2d\left(\frac{\Delta 2d}{3s}\right)^2\right)\left(4s = 3d\left(\frac{\Delta 3d}{4s}\right)^2\right)^2 = \left(5s = 4d\left(\frac{\Delta 4d}{5s}\right)^2\right)\right) \tag{1.12}$$

Our equation system now includes elements of what is happening orthogonal to the mathematically dominate structures of equation 1.11. As the $1d \rightarrow 2s$ definition of equation 1.11 begins to create a plane, a line of force (string) depicted by $0d \rightarrow 1s$ of equation 1.10 grows orthogonal to it. This line appears to be a weak force as it works to create a $1s$ variable. The geometric progression between the coupled equations continues as the $2d$ plane

of equation 1.11 starts to rotate. Now the weak force transmutes into a $2s$ planar shape as it exists orthogonal to the $3s$ variable of equation 1.11. Continuing the progression, as equation 1.11 moves up to the $3d \rightarrow 4s$ level, equation 1.10 shows a $3s$ type force is being created. This strong $3s$ force places constraints on the $3d \rightarrow 4s$ mass energy pattern of equation 1.12. It limits the maximum value of the $\Delta 3d/4s$ variable.

This idea of equation coupling become easier to understand if we compartmentalize the underlying geometry. Consider this...

$$\underbrace{Line\ \ Theory}_{eq.\ 1.10} \bullet \underbrace{Plane\ Theory^2}_{eq.\ 1.11} = \underbrace{Helix\ Theory}_{eq.\ 1.12} \qquad (1.13)$$

Equations 1.11, 1.12 and 1.13 underscore an important point: While variables may share the same dimension-space delimiters in the very large equation, the variables are not the same. Each and every item in these equations are subject to a unique set of geometric and mathematical conditions. No two items are the same. Hence what we have is the backbone of a classification system.

1.4 Variables

Earlier in the paper, we identified equation (1.1) as being of a physics origin. We know $E = MC^2$ represents the $3d \rightarrow 4s$ position. We intoned Planck's constant held the $\Delta 1d/2s$ and the $2d$ positions in a Heinsenberg gambit. By this logic, the $\Delta 2d/3s$ value shares its value with the $3d$ value, Mass. Other variables can be deciphered by their behavior. For example, magnetic phenomena may be classified as a $2s$ phenomena. It is unbounded, it oscillates like a drum's skin, and it may be stacked like plates to form polar entities. The following is a **very preliminary** assignment of variables to the physics equation. ...

$$\left(2s = 1d\left(\tfrac{\Delta 1d}{2s}\right)^2\right)\left(3s = 2d\left(\tfrac{\Delta 2d}{3s}\right)^2\right)^2 = \left(4s = 3d\left(\tfrac{\Delta 3d}{4s}\right)^2\right)$$

$$\left(y = \phi \boldsymbol{N}^2\right) \bullet \left(e = N\boldsymbol{M}^2\right)^2 = \left(E = M\boldsymbol{C}^2\right)$$

$y = magnetics$	$e = electron\,charge$	$E = Energy$
$\phi = gravity$	$N = Nucleus\ \ charge$	$M = Mass$
$\boldsymbol{N} = Nucleus\,charge$	$\boldsymbol{M} = Mass$	$\boldsymbol{C} = lightspeed$

where $Nucleus\ Charge$ represents integer values of $Planck's\ Constant$

(1.14)

To assign variables to the line theory portion of the equation system we must first determine which level of perception we wish to use. At the lowest level there is string theory, one level up there are weak force/strong force particle models, next level brings us to an orbital structure model, and the final level shows as an atomic properties model. My initial approach to classification was to use an atomic properties model. By grouping general properties of atoms into the equation, a basic schema of the periodic variance was composed. I was then able to transpose the equation into an orbital structure models, and into parts of a particle model. This area of the work is a long way from complete, so I would like to show the variables I used as the starting point in the proof sequences...

$$\left(1s = 0d\left(\tfrac{\Delta 0d}{1s}\right)^2\right)\left(2s = 1d\left(\tfrac{\Delta 1d}{2s}\right)^2\right)^2 = \left(3s = 2d\left(\tfrac{\Delta 2d}{3s}\right)^2\right)$$

$$\left(L = R\boldsymbol{V}^2\right) \bullet \left(B = V\boldsymbol{Z}^2\right)^2 = \left(m = Z\boldsymbol{S}^2\right)$$

$L = Line\,bond\,covalency$	$B = metallic\,bonding$	$m = malleability$
$R = Round\,bond$	$V = covalent\,bonding$	$Z = elasticity$
$\boldsymbol{V} = covalent\,bonding$	$\boldsymbol{Z} = elasticity$	$\boldsymbol{S} = Strength$

where $L = R\boldsymbol{V}^2$ is a weak force equation,

and where $m = Z\boldsymbol{S}^2$ is a strong force equation.

(1.15)

To understand the helix theory portion of the equation system we must be able to accept the following argument...

$$\underbrace{Chemistry}_{eq.\ 1.10} \bullet \underbrace{Physics}_{eq.\ 1.11}^{\ 2} = \underbrace{Biology}_{eq.\ 1.12} \tag{1.16}$$

In equation 1.16, we are saying biology is the product of physics and chemistry, and we are saying physics is the moderator of their relationship. It seems remarkable an equation system of abstract geometric energy values could lead us to classifying primary biological structures. But if you think of double helical geometry and its torsional dynamics under internal stress, patterns begin to emerge. From the equation system, we can collate what causes the internal stresses, and from the biology equation itself, we can surmise how the stresses affect DNA molecules. The following is the original variable assignment for the biology portion of the equation system...

$$\left(3s = 2d\left(\tfrac{\Delta 2d}{3s}\right)^2\right)\left(4s = 3d\left(\tfrac{\Delta 3d}{4s}\right)^2\right)^2 = \left(5s = 4d\left(\tfrac{\Delta 4d}{5s}\right)^2\right)$$

$$\left(H = X\boldsymbol{D}^2\right) \bullet \left(P = D\boldsymbol{U}^2\right)^2 = \left(T = U\boldsymbol{I}^2\right)$$

$$\begin{array}{lll} H = male\,chromosone & P = food\,supply & T = elapsed\,time \\ X = Female\,chromosone & D = DNA & U = Mitois \\ \boldsymbol{D} = DNA & \boldsymbol{U} = Mitois & \boldsymbol{I} = lifespan \end{array} \tag{1.17}$$

1.5 Theorems for Unified Field Equations

To better understand the mathematics here, I am going to go over it again with a slightly different approach. This approach amounts to an earlier iteration of the paper you just read. We begin by noting there is a mathematical gulf which exists between Einstein's special theory and his general theory of relativity. The special theory is a seemingly simple equation of the form $A = Z\phi^2$ while the general theory follows difficult axiomatic thought about the space-time continuum. The question is asked: If everything is relative,

then shouldn't it follow relatively the same mathematics? In other words, what are the communicative and associative powers of the mathematics of special relativity, and how can we get it to work for us in exploring the space-time continuum?

To answer these questions and to model a unified field equation, I have expanded on the idea of a space-time continuum itself by dividing the continuum into two subordinate continua and by developing a mathematical method to handle the complex associations which occur. The preliminary results seem to be quite reliable in predicting naturalistic patterns and behaviors.

There are eleven theorems which compose the logic of the mathematics presented here.

Theorem One:

The form $A = Z\phi^2$ models typical variance patterns in the natural world and therefore is useful in modeling the natural world.

Theorem Two:

As shown in the reordered form, $\phi = \sqrt{\frac{A}{Z}}$, Z represents a static (non vector) variable and cannot equal 0, A is a variable with dynamic vector characteristics, and ϕ^2 is the constraining or limiting variable.

Theorem Three:

The form is breakable into two parametric equations $\frac{A}{\phi} = V_1$ and $\frac{Z}{\phi} = V_2$

Theorem Four:

Power transfer theorem indicates maximum power transfer occurs when $V_I = V_2$

Theorem Five:

All $A = Z\phi^2$ forms occurring in the natural world are limited dimensionally in the space continuum, e.g., they can exist as a three-dimensional entity in a four dimensional time space $(3d \rightarrow 4s)$, as a two-dimensional planar entity in a three-dimensional space $(2d \rightarrow 3s)$, as a one-dimensional vector entity in a two dimensional planar space$(1d \rightarrow 2s)$, or more properly as a complicity of these states, e.g., $(2d \rightarrow (2d \rightarrow 3s) \rightarrow 3s)$.

Theorem Six: In a scalar simplified equation, a change from an (n)dimension to $(n + 1)$space is typified by the following ...

$$((n)d \rightarrow (n+1)s) \textit{ represents the equation...}$$
$$(n+1)\,s = (n)d \cdot \left(\frac{\Delta(n)s}{\Delta(n+1)d}\right)^2$$

Theorem Seven: *In a vector corrected equation a change from an (n)dimension to (n+1)space is typified by the following...*

$$((n)d \rightarrow (n+1)s) \textit{ represents the equation...}$$
$$(n+1)\,s = (n)d \bullet \left(\frac{\Delta(n)s}{\Delta(n+1)d}\right) \times \left(\frac{\Delta(n)s}{\Delta(n+1)d}\right)$$

...where the cross product establishes the characteristics of the $(n+1)$ *space. These characteristics tend to insure orthogonal orientation of the concept's planes and vectors in relation to each another.*

Theorem Eight:

The form $(n+1)\,s = (n)d \bullet \left(\frac{\Delta(n)s}{\Delta(n+1)d}\right)$ *represents a structured range of constants in closed (special) systems where rates of change* (Δ) *cannot exceed an maximum value for a* $(3 \rightarrow 4)$ *equation, a minimum value for a* $(1 \rightarrow 2)$ *equation or a integer value for a central* $(2 \rightarrow 3)$ *equation.*

Theorem Nine:

The typical form $A = Z^2$ *can be expanded in a prototypical fashion, e.g.,*

$$(3d \rightarrow 4s) = (ld \rightarrow 2s) \cdot (2d \rightarrow 3s)^2$$

where associations between variables follow inter-dimensional rules typified by

$$(\boldsymbol{D} = Y\boldsymbol{Z}^2) = (\boldsymbol{A} = B\boldsymbol{X}^2) \bullet (\boldsymbol{C} = X\boldsymbol{Y}^2)^2$$

And meaning

i.) The static variable of a $(3 \rightarrow 4)$ *or* $(2 \rightarrow 3)$*world becomes the constraining variable of a* $(2 \rightarrow 3)$ *or* $(1 \rightarrow 2)$ *world, respectively.*

ii.) Scalar and vector definition of key concepts allow a static variable, a scalar, to transmutes into a vector definition in the lower space equation. This allow duplicity of meaning, e.g., Is a photon

a wave or a particle.

Theorem Ten: *Dimension-space structure is predictable in the expansion of the mathematical system and controls the unit management attributes and physical qualities of the conceptual variables which occurs at a certain point in the equation structure.*

Theorem Eleven: *The prototypical mathematical structure shown above is further expandable in a prototypical fashion to create a full scale unified field equation. To understand how we might take the theorems presented above and arrive at the structure of a full scale unified field equation, consider the equation prototype* $B = CP^2$*, where* B *represents biology,* C *represents chemistry, and* P *represents physics. Simply stated, this equation says biology is the result of the actions of physics on chemistry. This logic is hardly arguable, and the formal structure of a master equation which incorporates it would be:*

$$\begin{aligned}(3d\,(\text{The Unified Equation of Biology})\,4s) = \\ (ld\,(\text{The Unified Equation of Chemistry})\,2s)\bullet \\ (2d\,(\text{The Unified Equation of Physical Science})\,3s)^2\end{aligned}$$

The above equation demonstrates the dimension-space bias of the three sciences in relation to each another. In addition, the field equations in biology and chemistry gives us places to put key concepts like time (a biological precept) and the strong force (a precursor of chemical structure).

Two important parts of creating field equations are unit management and variable classification. Unit management attributes, hence variable classification, are affected by the dimension-space notation of a variable. From our perception plane, a $(ld \rightarrow 2s)$ concept works to oscillate (rotates) its forces, a $(2d \rightarrow 3s)$ stores its forces(creates space), and a $(3d \rightarrow 4s)$ expresses its forces. Adding to the complexity of this is the dimension-space notational bias of each sub-equation in the full scale unified field equation. This again alters and refines the unit management attributes of the concepts in the equation. Furthermore, in creating a structured formula for dimension-space, we are creating a system to classify scientific

concepts based on their dimension-space attributes. This suggests scientific concepts are word assignments of the carrier mathematics, and so our task now is to associate concepts, preferably unit-manageable scientific concepts, to the dimension-space classification system. I am not sure all my classification decisions live up to this goal, but the following is presented here.

1.6 A Physics Equation

The special theory of relativity is expressed as $E = MC^2$, where E is energy (joules), M is mass (kilograms) and C is the speed of light (m/s). This equation may be seen as a $(3d \rightarrow 4s)$ equation and represents the dimensional level on which we ourselves live. According to the "Unified Theory" just presented, each other dimension-space has its own basic equation whose general form is the same as the relativity equation. To find the equation for the next lower dimension-space, we begin to look at the structure of matter itself. We must take the static variable of the $(3d \rightarrow 4s)$ dimension-space, then find its unit management equivalent in the $(2d \rightarrow 3s)$ dimension-space, and then in a further reaching "special case", transmute this unit management equivalent into a constant. In step with this logic, we should start by finding both a $(\Delta 2s)$ and a $(\Delta 3d)$ value for mass, and this is easily accomplished by noting mass(kg) has two meanings, the static definition mentioned above and a "moment of inertia" definition founded on the rotation of phenomena. This second definition is very close to what we are looking for, except one vector of this definition must be set aside for use in the $(ld \rightarrow 2s)$ equation. In the visual sense of the $(2d \rightarrow 3s)$ equation, a two-dimensional plane is being rotated about its axis to create a three-space. Using Maxwell's vector geometry as an inference point to understanding the orthogonality of phenomena in planar displacement, the three-space produced (volume phenomena) would be electrical in nature provided a corresponding two-space (planar phenomena) was magnetic. Accordingly, consider the equation $e = NM^2$ where e is the total electron charge, N is the nucleus force, and M represents the inertial definition of mass, subtended by one vector into a planar movement of two-space in a three-dimension measurement system. In such a subtended state or "special condition", now measured as a Δcharge/Δkg relationship, mass would also become a "center" constant, likely representing an integer which models the steps in quantum states. Governing

the moment of inertia is the nucleus force and the electron charge, with the electron charge being the dynamic variable, and nucleus force being the static variable of this cell equation.

The $(1d \rightarrow 2s)$ system related to the above formulations is seen as $y = \phi N^2$ where Y represents magnetics, ϕ represents gravitational force, and N is the nuclear force. In this equation, N is transmuted into a $(\Delta 1s/\Delta 2d)$ governing constant and may be viewed as the sweeping of a gravitational dot through a planar space, hence creating a magnetic vector. This relationship between gravity and magnetics seems odd, but gravity is the ultimate static variable, seemingly irrespective of charge, never nonexistent, and furthermore, according to the theorems, moving it initially yields a $(2s)$ vector concept. Magnetics describe this $(2s)$ concept better than volume phenomena like charge. When the intermediary between these forces, the $(\Delta 1s/\Delta 2d)$ force, reaches its special condition, it likely represents Plank's Constant in $2\pi r$ form. Consult Table One for a summary of these precepts.

Gravity as a volume displacement is not fully described in the above paragraph. Accordingly, it is important note how the dot and vector system of the $(1d \rightarrow 2s)$ gravity and magnetic system described above is tied mechanically to the $(2 \rightarrow 3)$ system. In the simplest sense, the planar rotations of $(2d \rightarrow 3s)$ system forces the sweeping of the $(1d \rightarrow 2s)$ around the $(2d \rightarrow 3s)$ axis. This action would give us both the magnetic dipole properties of particles and gravitational volume provided there is a measurable distance or displacement between the two orthogonal equations' geometric constructs. This displacement, when the special condition applies, represent a center constant which occurs in the formation of the larger equation shown in table 1.

The movements of geometric phenomena in the equation system are complex. How are particles such as an electron, quark, or neutron represented on it? The electrodynamic models of atoms featured later in this book show how this problem was initially approached, and now, while working on a vector-corrected version of the unified field equation, I have found a surprising answer. By using the cross product definition of the constants, wherein there is a tendency toward both duplicity and orthogonality in the exponential constants in the equation system, a proton may be modeled as consisting of two $(2d \rightarrow 3s)$ operands and a $(1d \rightarrow 2s)$ operand, whereas a neutron may be modeled as consisting of two $(1d \rightarrow 2s)$ operands and a $(2d \rightarrow 3s)$ operand. This implies, of course, a

quark represents subcomponents of the physical science equation. Similarly, a photon may be modeled as an association of the dynamic variables of the one-space and two-space system, namely e, electron charge and y, magnetics. The electron is similar in model to the photon, but requires us to take note of a variable in the subsequent chemical science equation. **Table 1**

1.7 A Chemical Science Equation

The pursuit of a field equation to reflect chemical science has lead down some interesting paths. The equation started as an arbitrary model of the periodic table where various atomic properties were grouped in the equation according to seemingly obvious logic patterns. These patterns arose from orbital designations. From there, I began a study of subatomic structure itself with the idea the transition of the atomic properties shown in the equation somehow represents key transitions in the arrangements of the atom's neutrons and protons. This lead to the electrodynamic theory of atoms, the most accurate portion of which is presented later in the book. Now, with the growing maturation of the field mathematics in terms of understanding vector correction, several points have to be noted. First, the entire unified chemical equation operates within confines of a $(1d \rightarrow 2s)$ dot vector system. (The dot vector system in use here contrasts with the line vector system in use in the physics equation.) This suggests the individual dots represent neutrons and/or protons within an atom's subatomic structure. Second, the entire physical science equation had to be raised in power exponentially to allow for the creation of this chemical science equation. Given the cross product nature of this process, this allows for stereo growth of the dot vector systems. Third, the chemical science equation switches these growth patterns. This implies the geometry of an atom's structure is ascribable to actual vector pattern growth of the equation structure. My conclusion is the mathematics, when vector-corrected, has the power to model atomic structure geometrically and to produce electrodynamic models.

The first cell equation in the series is assigned to the $(ld(ld \rightarrow 2s)2s)$ position. It is $L = RV^2$ where L, R, and V represent line bond, round bond and covalent bonding respectively. This equation represents the organic molecules and their orbitals. The round bond variable (ld(1d)2s) is the most fundamental of these variables and it seems to represent the rotational reflex, the de-

A PHYSICS EQUATION

$$\mathbf{E = MC^2 = Y = \Phi\, N^2 \bullet (e = NM^2)^2}$$

Proposed Cell Equation	Variable Description			
	D. S. C.*1	Sym -bol	Name	Comments on Unit Management
$E=MC^2$	(2d(4s)3s)	**E**	**Energy**	Joules
(2d(3d→4s)3s)	(2d(3d)3s)	M	Mass	Kilograms
	(2d(Δ3s/Δ4d)3s)	**C**	**Lightspeed**	Metres per Second
$e=NM^2$	(2d(3s)3s)	***e***	**electron charge**	
(2d(2d→3s)3s)	(2d(2d)3s)	N	Nuclear Force	
	(2d(Δ2s/Δ3d)3s)	**M**	**Mass**	Moment of Inertia
$Y=\Phi N^2$	(2d(2s)3s)	**Y**	**Magnetics**	
	(2d(1d)3s)	Φ	Gravity	
(2d(1d→2s)3s)	(2d(Δ1s/Δ2d)3s)	**N**	**Nuclear Force**	Plank's Constant

*1 Dimension Space Classification

Figure 1.1: Dimension Space Classification: Table 1

sire to spin. This suggests the chemical science equation is not completely subordinate to the physical science equation as, without spin, the vector interpretation of the physical science equation would be pointless. This fundamental variable appears to represent the "strong force" in the present lexicon. Interestingly, this desire to rotate, to thereby create a time function, also predicates the biological field equation as time is a fundamental function of biological perception. The $(ld(2s)2s)$ variable represents discrete line-bond growth of protons or neutrons in the equation system. In terms of modelling, the discreteness of this growth of line bonds seems to be insured by the separate definition of protons and neutrons in the physical science equation. The chemical science equation seems to operate independently on both of these particles to create separate strings of line-bonds. However, the $(ld(\Delta 1s/\Delta 2d)2s)$ variable both establishes an orthogonal relationship between these strings and suggests a minimum constant to establish finite lengths for these line-bonds. Combined with the previously mentioned stereo effect of the physics equation, this creates the electrodynamic models shown later in the book.

The central cell equation in this system models the f-orbital series and is stated as $B = VZ^2$ where B represents metallic bonding, V represents covalent bonding, and Z represents elasticity. This equation portrays the growth of new proton line-bonds in heavier atoms. As there seems to be a maximum proton line-bond length of nine denoted by the end of the p-orbital series in the periodic table, and as a "center constant" is called for in this cell equation, we can infer this equation means f-series elements require a volume producing line-bond deployment strategy. The best answer for this seems to be the secondary growth of proton line-bonds parallel to one another while maintaining the basic tetrahedral patterns of lighter elements. In this scheme, neutrons bridge both between rows of parallel proton line-bonds and between the resulting substructure to form a more or less tetrahedral core. An interesting aside to this growth pattern is seen in the iron atom where a model can be constructed to show how an element can be created out of one of the substructures. Being made of three parallel line-bonds, two of which are filled and one of which has eight protons, an element is created which has both a strong magnetic dipole and a slight covalent property.

The dynamic cell equation in this series models the d-orbitals in the periodic table. This is represented by $r = ZS^2$ where r

represents radioactivity, Z represent elasticity, and S represents "strength". According to the electrodynamic models, a structural duality occurs in this equation cell. Here, the general tetrahedral structure is first stabilized by the deployment of proton line-bond bridges between the magnetically sympathetic areas of the tetrahedral. But as these areas are filled, and as the table transverses the final complete f-orbital series, the filling must take place between magnetically contradictory areas. This causes nuclear instability and radioactivity in these large atoms. The "maximum constant" in this equation likely represents the maximum size of elemental structure. This number is 108, if the maximum length a proton line-bond can achieve is nine. The placement of the three cell equations into a field equation reveals the central importance of the f-orbital series in the periodic table. **Table 2**

1.8 A Biological Equation

It may seem odd to the reader someone would try to create a general biological equation using the underlying theorems of special relativity mathematics, but this is where the mathematics now point. I have again used the process of establishing static variables, dynamic variables, and limiting structures to infer this equation. Following this, and following the creation of the "atlas" equation, I have attempted rudimentary verification through the electrodynamic modeling of biological function. The results seem remarkable when correlated with the physics and chemistry field equations.

The first equation to consider is $P = DU^2$, where P represents Food Supply, D represents DNA, and U represents Mitosis. This is the central $(3d(2d \rightarrow 3s)4s)$ equation of the field and shows a comparatively simple relationship in the cellular environment. DNA is not a simple mechanism however, as its central role is anticipated by chromatic behavior. Hence, the $(3d(ld \rightarrow 2s)4s)$ equation is $H = XD^2$ where H is the male chromosome, X is the female chromosome, and D represents DNA in the "special vector sensitized condition." The male chromosome is given the dynamic position in this equation both because of its unique transference pattern and because the female variable cannot equal zero for life to occur.

The third cell equation of this series is very important as it establishes the precept of time. This precept is of course the simplest erudition of the biological equation and is the variable which allows

A CHEMICAL SCIENCE EQUATION

$$\mathbf{r = ZS^2 = L = RV^2 \cdot (B = VZ^2)^2}$$

Proposed Cell Equation	Variable Description			
	D. S. C.*1	Symbol	Name	Comments on Unit Management
$r=ZS^2$ (1d(3d→4s)2s)	(1d(4s)2s)	**r**	**radioactivity**	
	(1d(3d)2s)	Z	Elasticity	
	(1d(Δ3s/Δ4d)2s)	S	**Strength**	108 amu
$B=VZ^2$ (1d(2d→3s)2s) f-orbitals	(1d(3s)2s)	**B**	**metallic bond**	
	(1d(2d)2s)	V	Covalent Bond	
	(1d(Δ2s/Δ3d)2s)	Z	**Elasticity**	9 units amu
$L=RV^2$ (1d(1d→2s)2s) s to p-orbital	(1d(2s)2s)	**L**	**Line Bond**	
	(1d(1d)2s)	R	Round Bond	
	(1d(Δ1s/Δ2d)2s)	V	**Covalent Bond**	3 amu

*1 Dimension Space Classification

Figure 1.2: Dimension Space Classification: Table 2

the field equations of physics and chemistry to interact. It differs from the definition of time (C) in Einstein's special relativity of time by being a general concept. This is in accordance with the marvellous duality of meaning which runs through the mathematics of this paper. The equation is $T = UI^2$ where T represents time, U represents mitosis, and I represents life. In terms of biology, this equation puts time constraints on the activity of mitosis, and is an important part of the biological model.

With the establishment of the three cell equations, the formation of the field equation in biology can proceed. This equation establishes the central role of DNA in the behavior patterns of the cell, with replication and reproduction activities being subordinate.
Table 3

1.9 A Prototype Unified Field Equation

The interpretation of the results of the biological equation in an mathematical sense cannot begin without establishing solid connections in the physical and chemical sciences. This is accomplished through the formation of the three field equations into an "atlas". While the results are staggering in terms of their complexity, it is from this equation the electrodynamic modelling of biological function proceeds. The idea DNA strands have electrical conduction through their sugar tubes is indicated by this equation. The idea DNA is wound into chromosomes for communicative effects based on electromagnetic phenomena is demonstrated by this equation. Ideas about how cell differentiation is controlled in concert by magnetic tension and electrostatic fields arise from this equation.

To substantiate these claims, we must associate the electrodynamic concepts in the physics equation to structural concepts in the chemistry equation and then compare them to the physical reality modeled in the biological equation. My approach has been to first study the parallels between the different field equations, as this seems to give the initial clarity of what we are looking at, to, second, study standard textbooks in biochemistry, histology, and morphogenesis to see if the predicted behaviours agree with what is known, and then to develop and refine electrodynamic mechanical models based on this. While it is odd to look at the "life force" in such a mechanical, non-mystical manner, the claims mentioned last paragraph were found by this preliminary method.

The importance of my preliminary method is it helps to refine

A BIOLOGICAL EQUATION

$$\mathbf{T = UI^2 = H = XD^2 \bullet (P = DU^2)^2}$$

Proposed Cell Equation	Variable Description			
	D. S. C.*1	Symbol	Name	Comments on Unit Management
$T=UI^2$	(3d(4s)4s)	T	Time	
	(3d(3d)4s)	U	Mitosis	
(3d(3d→4s)4s)	(3d(Δ3s/Δ4d)4s)	I	**Life Force**	
$P=DU^2$	(3d(3s)4s)	P	Food Supply	
	(3d(2d)4s)	D	DNA	
(3d(2d→3s)4s)	(3d(Δ2s/Δ3d)4s)	U	**Mitosis**	
$H=XD^2$	(3d(2s)4s)	H	Male	
	(3d(1d)4s)	X	Female	
(3d(1d→2s)4s)	(3d(Δ1s/Δ2d)4s)	D	**DNA Energetics**	

*1 Dimension Space Classification

Figure 1.3: Dimension Space Classification: Table 3

the equation system's space-dimension vector geometry. This leads us to the process of extracting and classifying meaningful reduction equations from the atlas to underscore the various biological models. Complicating this process is the duality of meaning of key variables, obvious weakness in the resolution of unit management issues, and the incomplete study of the vector mathematics inherent in dimension space continua.

Two general reduction equations are easily found. As noted in the theorems, parametric equations are an integral part of the mathematical form. Like in Ohm's law, the entire atlas equation is breakable into two parametric potential energy equations. These equations are helpful not only from the conceptual standpoint of establishing discrete behaviors, but also because they explain to us the power transfer theorem. This theorem states maximum power transfer occurs when potential energy levels of the two equations are at the same strength. **Figure 4** shows the atlas equation and the parametric subsets of this equation. The first parametric equation represents food supply for biological forms, whereas the second parametric represents an equation about DNA structure.

1.10 Ancillary Remarks

The mathematics used in this paper should at once be familiar and strange to the reader. Obviously one recognizes the form $A = Z\phi^2$ from the theory of relativity and ohm's law. The idea this mathematical structure is universal occurred to me as I worked on applying mathematical code to conceptual structures in the humanities and social sciences. I always came back to the idea there are a static base variable, a dynamic variable and a constraining exponential variable. Spoken theories which occur in social sciences and the humanities seem to be analyzable through the grouping of their primary concepts into this mathematical structure. For example, Freudian theory is expressible as $S = IE^2$ where S, I, and E represent the superego, id, and ego respectively. This may seem odd and unimpressive at first, but the mathematical form $A = Z\phi^2$ is a tremendous knowledge carrier. In the Freudian example, the id is the static base variable, the superego the dynamic variable, and the ego is the mediating or constraining exponential variable. The machinations of these variables in the equation system can be shown to follow Freudian precepts. Interestingly, the exponential equation system also breaks down into two parametric non-

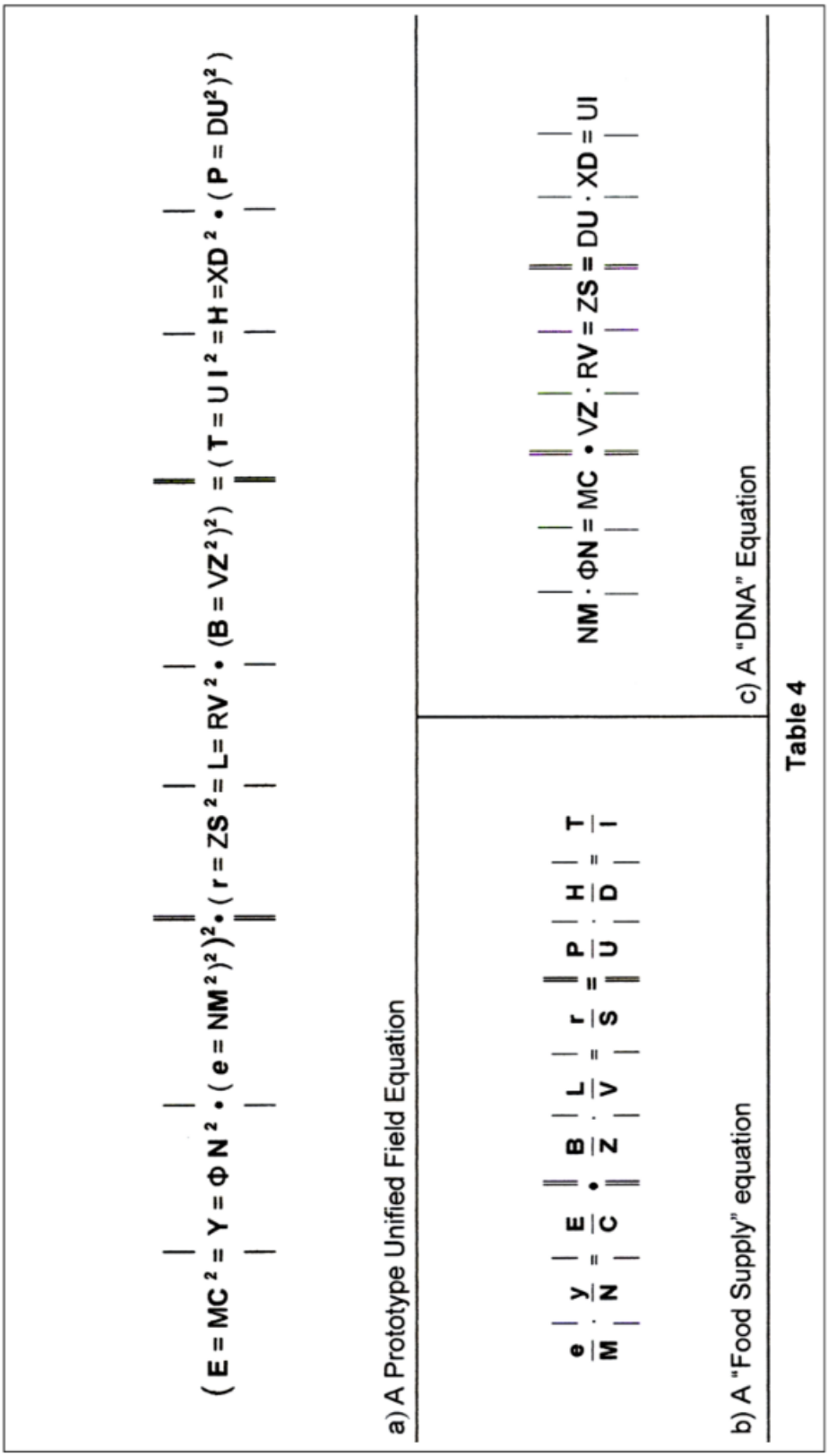

Figure 1.4: The Unified Field Equation

exponential states, typified by the Freudian example by $V_1 = \frac{S}{E}$ and $V_2 = IE$. These two states seem to be roughly congruous with feminine and masculine behavior patterns, respectively.

Most ideas of Civilization are easily modelled by the equation system. It seems we keep repeating the same pattern over and over. Consider how the American Constitution can be written as the equation $E = RJ^2$ where E represents executive power, R represents representative power, and J is judicial power. The parametric equations E/J and RJ suggest the upper house and lower house, respectively. The pattern of analogy continues in religious precepts. Consider how Christian perception can be summarized by the equation $S = FH^2$ where F represents the Father, S, the Son, and H the Holy Ghost. The parametric equations here seem to represent the philosophical difference between Protestants and Catholics in this religion. This underscores a point made so elegantly by Richard M. Weaver in his book "The Ethics of Rhetoric" where he stated in a non mathematical fashion how the basis of conceptual argument can be summarized by the equation $C = DA^2$ where C represents the argument from circumstance, D represents the argument from definition, and A^2 may be referred to the truth of argument. We may further analyze the variance between protestant and catholic religions as $P = CD^2$, where P is protestant, C is catholic, and $D^2$is the truth of diversity. We could easily substitute the Islamic divisions into this equation with $Shia = Sunni \cdot Diversity^2$. (A good religious discussion is to decide which faiths take "the argument from circumstance" as its basis and which take "the argument from definition" as its basis). We may carry this dialogue further by saying the precept $Mohammed = Abraham \cdot Allah^2$ might be a good start in building a mathematical model of the mechanics of the Islamic faith. We should recognize here this passage in Qur'an 5:73,"They do blaspheme who say: Allah is one of three in a Trinity, for there is no God except One Allah". In this context we must remember Mohammed and Abraham are mediators of the religion and not deities.

Doubtless there are many analogous systems in our world, but what about the subtle interconnections? Can the mathematics expand outward to explain complex sociological, political, or economic structures? One example you might pursue to answer these questions concerns a more detailed examination of the relationship between the marketplace, the banks, and the government. Such a

system may be modelled in equation form as...

$$(D = SE^2) = (L = XI^2) \cdot (C = IS^2)$$

where the upper equation, $D = SE^2$ represents the marketplace, the lower equation $L = XI^2$ represents banking, and the central equation $C = IS^2$ represents government. The variables in the marketplace equation are D, demand, S, Supply, and E, economic activity. The variables in the banking equation are L, loans, D, deposits and I, interest rates. The variables in the government equation are C, the money supply, I, interest rates, and S, supply. While this model helps to clarify the machinations of our economic machine, it has shortcomings. Does it examine the relationship between the creation of technology and its effect on demand? Does it explore the effects of political beliefs or consumer saving patterns on the money supply? These questions suggest this model of our economic system is only a small part of a larger equation which would include political structures and social beliefs. I think there is much left to discover.

1.11 Discussion

The difficulty of the mathematics introduced here is we have no reference point to understand what it truly means. What is its significance? My approach to this question has been to study the energy relationships between the variables, and this study has lead me to a new mechanical perspective of biological and chemical phenomena. Many unknown energy patterns and relationships have become apparent. For example, I have been able to develop mechanical models of the interior of atoms. I have used these models to establish lines of magnetic continuity exists through the p-orbital vectors of covalently bonding atoms. This confirmed to me the work I have done on DNA/chromosome energetics. Imagine looking at a organic molecule such as DNA with the idea magnetic continuity exists through each linkage. All of a sudden what we are looking at is an electromechanical machine and not the mysterious "life force" of old. The key point is the equation system points toward this pattern. (The DNA's acid is believed to supply electrons to the core of its adjacent sugar ring, and, as these rings are stacked to form two pipe-like structures in the helix, a type of electrical conduction occurs. The electrons move towards the sugar rings because they are attracted towards the central bases.

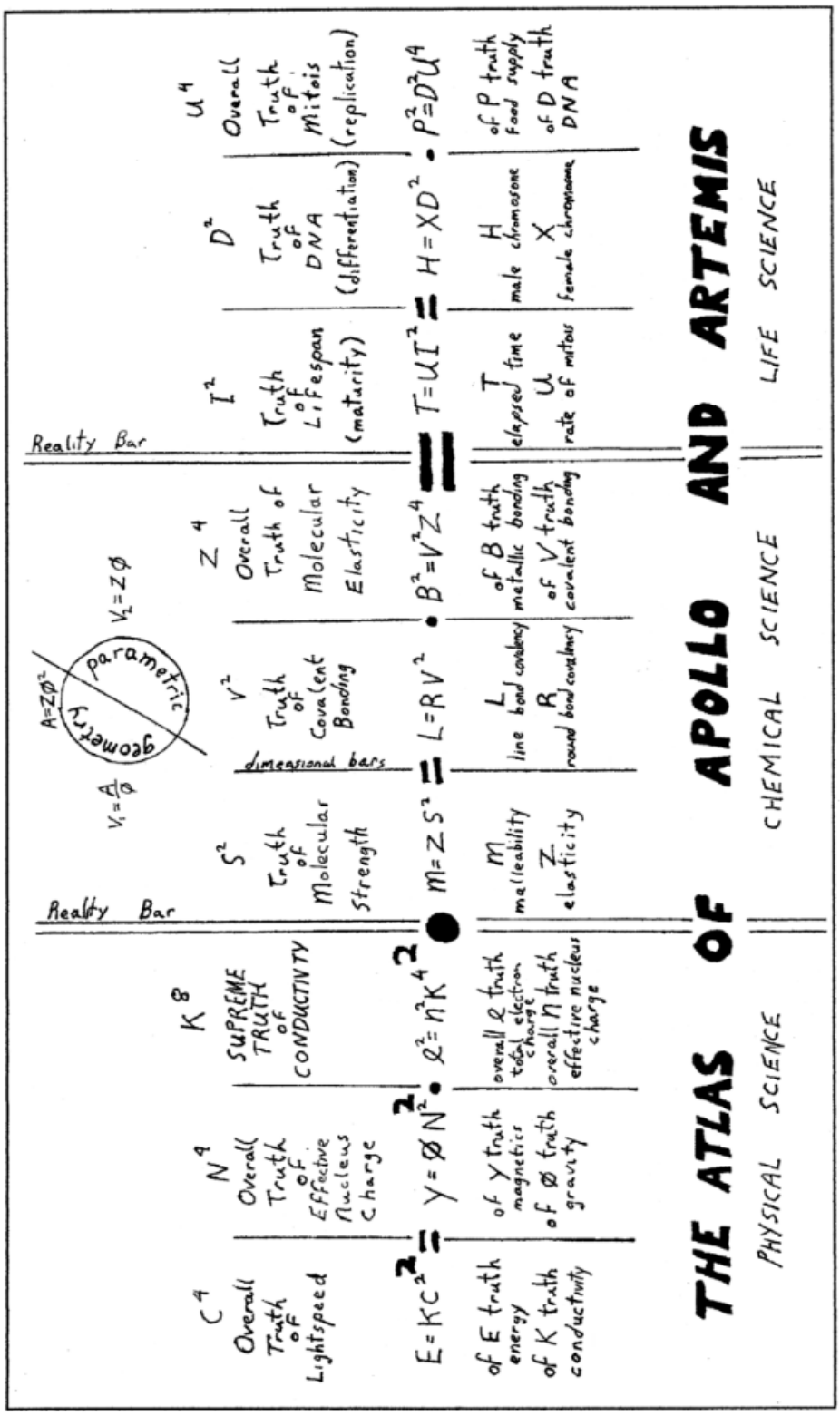

Figure 1.5: The Atlas of Apollo and Artemis

The torsional mechanics of conduction within a double helix can cause different DNA/chromosome "behaviors" like consolidation, dissolution and gene expression to occur.) In the larger picture, once the energetics of molecules like DNA are better understood, it should become possible to see how those forces control and orchestrate cell differentiation. Ideally, these observations can then be exploited to develop new medical theories.

To conclude I should note the equation system presented here is, on the one hand, a mathematical classification system for scientific phenomena, and it is, on the other hand, a geometric modelling tool for understanding the mechanics of science. It will need the work of many people in many disciplines to be fully understood.

Notes

Chapter 2

The Organization Of Nucleons in Atoms

Key Words: line-bond, neutron line-bond, proton line-bond, line-bond filling, torque-converter mechanism, subatomic structures, planetary models.

How do you build an atom? How do you arrange protons and neutrons to create a stable elemental structure? What rules must you follow? This thesis attempts to answer these questions. It shows how the baryons form a electro-mechanical organization which produces specific electron orbital patterns. The purpose here is to deduce which mechanical patterns can best produce the orbital peculiarities of a particular atom.

In scope, this paper covers the breadth of the periodic table, with the emphasis being put on sub-atomic configurations which occur at key points in the growth of electron orbital fields. The accuracy of the structural models here envisioned is thought to range from highly accurate in the lower atomic number atoms, to increasingly hypothetical as the atomic numbers increases. Mechanical models of baryon arrangements ln helium, carbon, neon, argon, iron, krypton, and xenon are shown, as are schemas for understanding f-orbital filling and the growing structural contradictions of the larger elements.

2.1 Theoretical Foundations

In the study of the subatomic world, it has long been accepted neutrons and protons are built of quarks. The neutron is seen as having two down quarks and an up quark whereas the proton is seen as having a down quark and two up quarks. The up quark represents a particle with a strong positive force, and the down quark represents a particle with a weaker negative force. The following assumption can therefore be made: The dispersion of quarks in a nucleon's core results in a structure with an non-equilateral dispersion of charge around its circumference. Therein, both the neutron and the proton may be pictured as having an alternating band of positive and negative electrical charge along their meridian lines. In the case of the neutron, the sum of the energy this alternating band presents to the exterior is zero, but the mechanical attributes of the band are inescapable. Likewise, the proton presents an alternating band of charges to the exterior, but this time, the sum of the electrical charges present has a positive electrical force. The proton would require three more down quarks to be electrically neutral[1]

The existence of alternating areas and intensities of charge in the neutron's and the proton's core allows us to view these nucleons as mechanical building blocks which must respect principles of motion, magnetism, and electricity. The first principle to consider concerns how a moving electrical charge generates a magnetic field perpendicular to its movement. In the case of a rotating proton or neutron, this results in the rotational axis becoming a two pole magnet. This bar magnet behavior establishes a plausible basis for multi-nucleon bonding along the rotational axis. This bonding could only occur if the electrical charges of each of the bonding nucleons were arrayed in a cohesive manner. We know this is possible because each of the nucleons have an unequal charge distribution as caused by the nucleon's quark substructures. Hence, north to south magnetic coupling along the rotational axis, combined with positive to negative electrical coupling through this axis, leads to the creation of nucleon "line-bond" structures.

Certain conditions apply to the electrical component of line-bond coupling. For example, a neutron aligned axially with a proton would likely have much instability as caused by the non-symmetrical distribution of electrical charge which would exist be-

[1]See chapter 4, Sub-Baryon Mechanics, for more details.

tween their quarks. This lack of symmetry will cause severe tilting of the axial bond as the the proton's strong positive quarks draw down on the neutron's negative quarks. The proton's electron will be unable to counteract this effect as its orbital will be altered by interference from the neutron. It is a two-fold effect. Neutron to neutron line-bonding seems more feasible, however. In this case, the electrical attractions and repulsions of the quarks along the binding axis are balanced and symmetric. There is no overpowering electrostatic force to contend with. Proton to proton line-bonding is not as simple as neutron to neutron line-bonding, however. The forces may be symmetrical, but in binding axially, the electrostatic forces of the nucleon's positive quarks are not dampened by the right number of negative quarks. There is extra energy to disperse of, and this dampening must come from elsewhere. The obvious first source of this dampening is from the electrons which orbit the proton. Another possible source of positive force dampening is from secondary interaction between proton and neutron line-bonds. All toll, the combined effect of electrons and neutron line-bonds must be sufficient to neutralize some of the proton's positive electrical energy, and hence to allow proton line-bonding to occur. (The proportion of energy which is dissipated by either of these two forces will later be shown to lead to orbital characteristics, and, furthermore, in the rest of this discourse, the terms, line-bond, proton line-bond, and neutron line-bond will be used extensively.)

When line-bonds are formed out of neutrons and protons, transformations in the spectral absorbtion patterns are likely to occur. Initially, these patterns are seen to be based on the speed of revolution, e.g., the frequency, of the revolving nucleons. However, it seems reasonable to assume that as the line-bonds grow in length, their rim speed decreases to avoid spontaneous decay. The machinery is becoming heavier and clumsier. This, in turn, reduces the absorbtion frequencies of the structure. Since the nucleon is a discrete energy source, this reduction of speed must result from the consumption or storage of energy from within, and so it is assumed the magnetic and electrical aspects of line-bonding causes there to be less energy available for secondary motion.

Two paragraphs back, we noticed the difficulties protons and neutrons have in forming line-bonds. However, now notice how the requirements of elemental construction requires some type of cohesive interaction take place. Let us consider how an intermeshing axis of interaction in which the particle's magnetic axes meet

perpendicular to one another could allow a mechanism of cohesion to occur. Therein, the electrical charges of the neutron's and the proton's quarks are aligned in a propulsive and cohesive fashion. The two positive quarks of the proton apply attractive force to the two negative quarks of the neutron, and the single positive quark of the neutron applies attractive force to the single negative quark of the neutron. The proton's electron is thus afforded some orbital stability because, as it revolves, it is alternatively exposed to the positive tracking force of either the proton or the neutron. It can then add magnetic stability to the intermeshing structure as it makes a compromise between the perpendicularly opposed axial magnetic fields. In this mechanical arrangement, stability is still somewhat lacking: The arrangement lacks symmetry. This can be overcome by either doubling the perpendicular axes, or by doubling the number of neutrons acting on the intersection of the axis. The best way to illustrate these rudimentary principles is to consider their implementation on the simplest neutron-proton combination, the helium atom. As the accompanying diagram shows, the concepts developed so far work to form a stable elemental structure. Therein, a two neutron line-bond is coupled at ninety degrees with a two proton line-bond. The center of the element is the junction where the coupling occurs. The formed atom is then able to act as a small and efficient machine, and has all the chemical attributes we associate with helium. **Fig. 1**

In forming an element, the nucleon's rotational characteristics, and hence, its frequency absorbtion characteristics once again change. One as yet unmentioned reason for this frequency absorbtion change is the energy redirection incipient in the nucleon to proton interaction. A second reason for this change is found by considering the secondary rotations which are possible in the elemental structure. In the case of helium, the molecule will tumble on an combination of two distinct secondary vector patterns. This tumbling insures the element has stability in the three dimensional world, and is propelled by the torque supplied by the respective nucleon line-bonds. In causing this secondary tumbling, the element helps insure it own lack of reactivity.

2.2 Small Atoms

As a model, the helium atom lacks the information we need to understand p-orbitals. Hence, carbon is considered. It has four

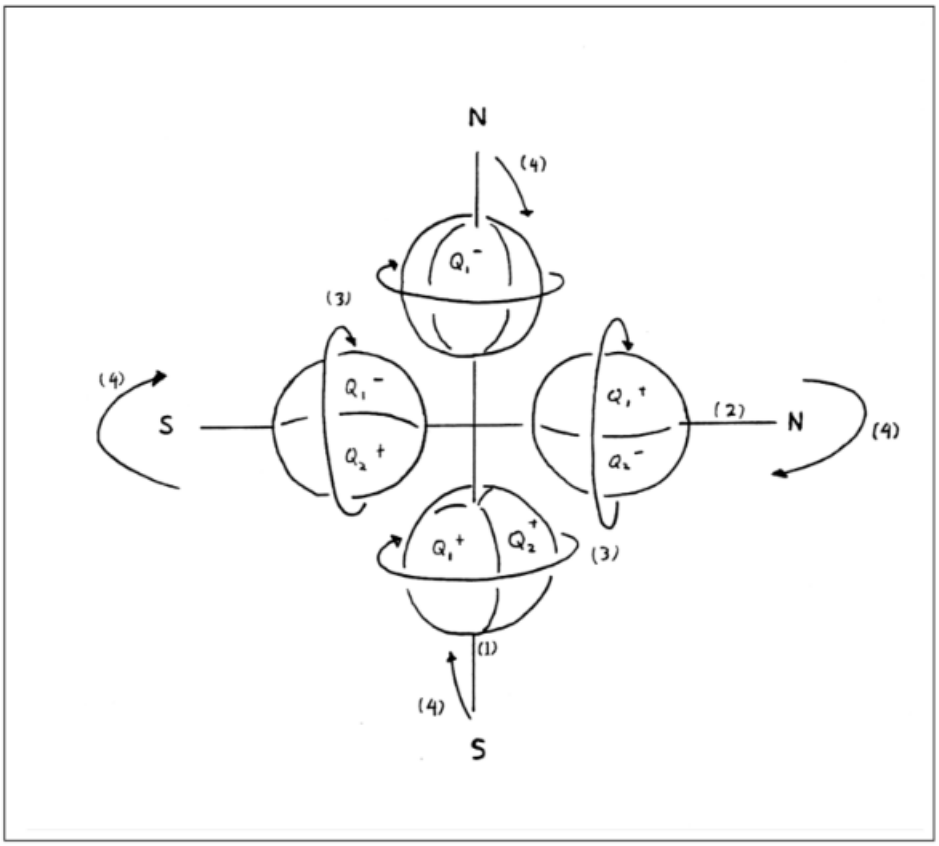

Figure 2.1: Nucleon Interaction in the Helium Atom

Key: (1) represents the proton line-bond axis, (2) represents the nucleon's spin characteristics, (3) represents the nucleon's spin characteristics, (4) represents the atom's secondary spin characteristics, and Q(1,2,3)(+,-) represents a quark, its count number, and its electrical charge, respectively.
Explanation: The principles of nucleon mechanics are clearly shown in the helium atom. Here, proton line-bonding, neutron line-bonding and the neutron to proton associative mechanism are shown as they combine to form the simplest compound element, helium.

p-orbitals -all of which are active for bonding purposes - and two s-orbitals - which are inactive for bonding purposes. To create these orbital patterns, carbon has six protons and six neutrons at its disposal. The question to be answered is: How are these neutrons and protons arranged with each other to create an atom with these specific orbital patterns? A diagram included in this paper shows the most probable arrangement. In it, we see the protons grouped into two line-bonds of three protons each, and we see the neutrons grouped into two line-bonds of three neutrons each. The two neutron line-bonds are synchronized together on a parallel axis, with ninety degrees of twisting along this axis. The proton line-bonds are connected to and arrayed perpendicular to the double neutron line-bond structure, with each of the two proton line-bond structures being at different ends of the doubled neutron line-bond structure. Because of the aforementioned twisting of the neutron line-bond structure, the two proton line-bond structures themselves are arrayed perpendicular to each another, and this balances the electrostatic repulsion which exists between the proton line-bond's ends. This,in turn, insures the structural stability of the formed element. **Fig. 2**

In terms of simple mechanics, the double neutron line-bond structure may be considered to be a "torque converter" which allows axial twisting of energy through the core to occur. While this benefits the stability of the core, it also determines the way the electrons spin around the core. Firstly, the two electrons associated with the center proton of each of the two proton line-bonds occupy the filled s-valency. They revolve around the atomic core. Therein, they follow a circular path which forces them out of the initial orbital pattern vectors given to them by their originating protons, and into the vectors given them by both the structurally opposite proton and the originating proton. P-orbital patterns are more complex, however. In this case, the electrons associated with the four protons which are arrayed at the ends of the two proton line-bonds are forced to become spatially separate from the atomic core. They are thrust into an area above the proton line-bond, and thus form the distinctive p-orbital electron clouds. It is thought both the electro-static forces caused by the previous filling of the s-orbital valencies and the influence of the neutron torque converter mechanism on electron rotation precipitates this pattern. The electrons are necessarily coupled to their respective protons and hence are forced to climb the proton's line-bond axes as they move away

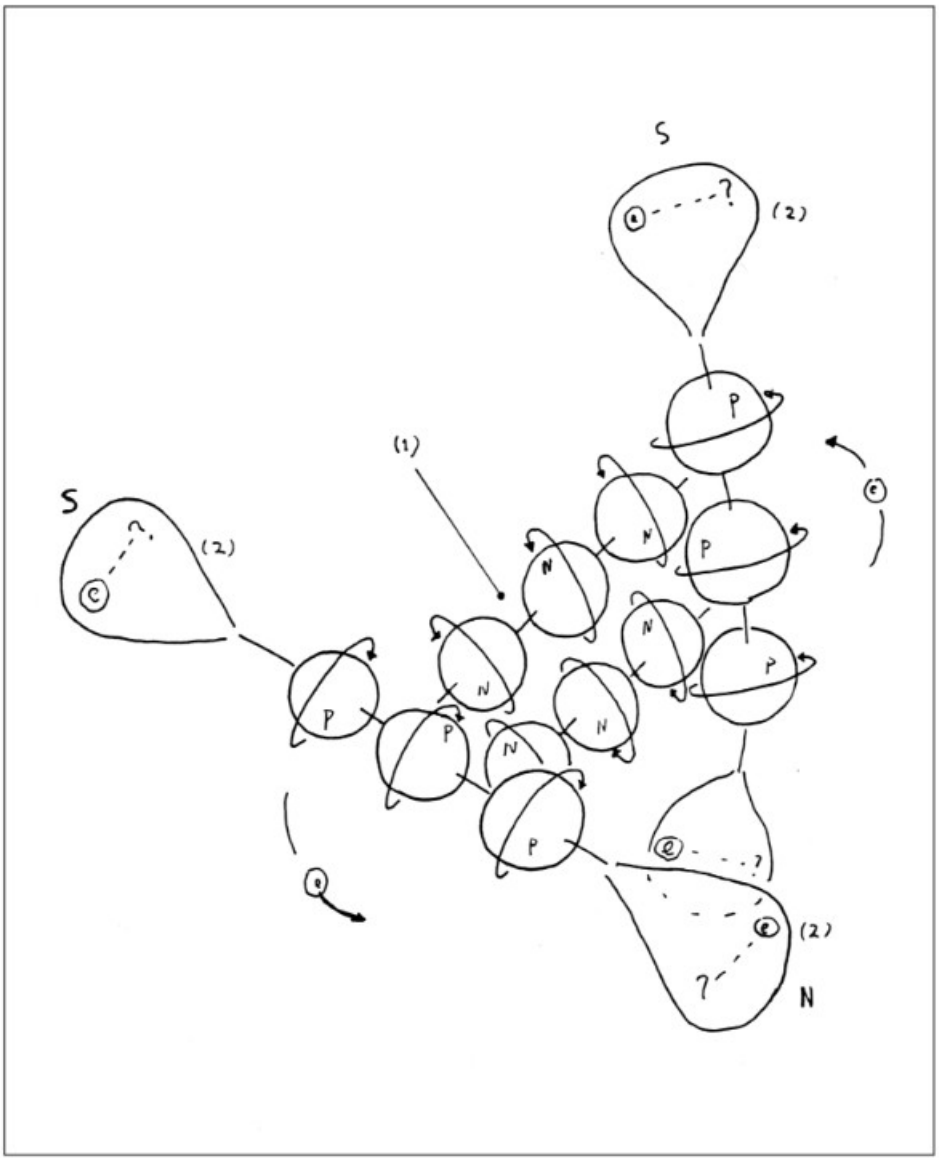

Figure 2.2: The Carbon Atom

Key: In this diagram, P represents the positive side of a proton, and N represents the negative side of a neutron. The symbol (1) points to the neutron torque-converter mechanism, and the symbol (2) shows a partially occupied p-orbital area.
Explanation: The structure of carbon is thought to contain two three nucleon length neutron line-bonds. Electrons associated with the center of each proton line-bond fill the two s-orbitals, while those associated with the ends of these line-bonds are mechanically projected into the four p-orbitals.

from the atom's center.

In the carbon atom, there is one electron available ln each of the p-orbitals. This allows p-orbital bonding to occur. Why is this so? The author reason the answer lies in understanding the stability needs of the lone p-orbital electron. This electron is being forced into a circular orbit exterior to the atom's center. The electron is trying to rotate around a circular path without sufficient counterbalancing being supplied by the electron's associate proton. It is an unbalanced, unsymmetrical situation. However, in bonding, the pairing of this singular electron with a mate will result in the stabilization of the electro-mechanical forces incipient in a outwardly projected electron. The mate electron would have to have similar vector dynamics to allow this bonding to occur.[2]

Filled p-orbitals can also exist as a result of the arrangement of neutrons and protons within an atom. Neon is a prime example of this effect. It has four filled p-orbitals. Obviously, both the elements's proton line-bonds and its neutron line-bonds must work together to allow this to happen. Recall how the carbon nucleus had six protons, four of which were positioned exterior to the edges of the neutron line bond doublet. This allows four open p-orbitals to occur. In contrast, neon has four more protons and two more neutrons than carbon. Somehow, because of this, it has filled p-orbitals. The difference in the structure of neon is thus formulated. It has a five proton long line-bond at each end of a doubled neutron line-bond of five nucleons in length. As compared to carbon, the positioning of two protons exterior to each neutron/proton intersection allows the filling of the p-orbitals to occur. There are two electrons available for each of these orbitals. **Fig. 3**

Overall, the right hand side of the second row of the periodic table may be seen as having similar configurations to carbon and neon. The most important difference between this group of elements is the relationship which exists between the length of the proton line-bonds and the point of neutron line-bond intersection. This determines which of the p-orbitals are filled. It is also important to note how the length of the doubled neutron line-bonds also increases as one transverses the second row of the table. This suggests the method of atomic growth must at some point change to insure compactness.

The right hand side of the third row of the periodic table contains elements with the same p-orbitals properties as those already

[2]See figures 2.10 and 2.11

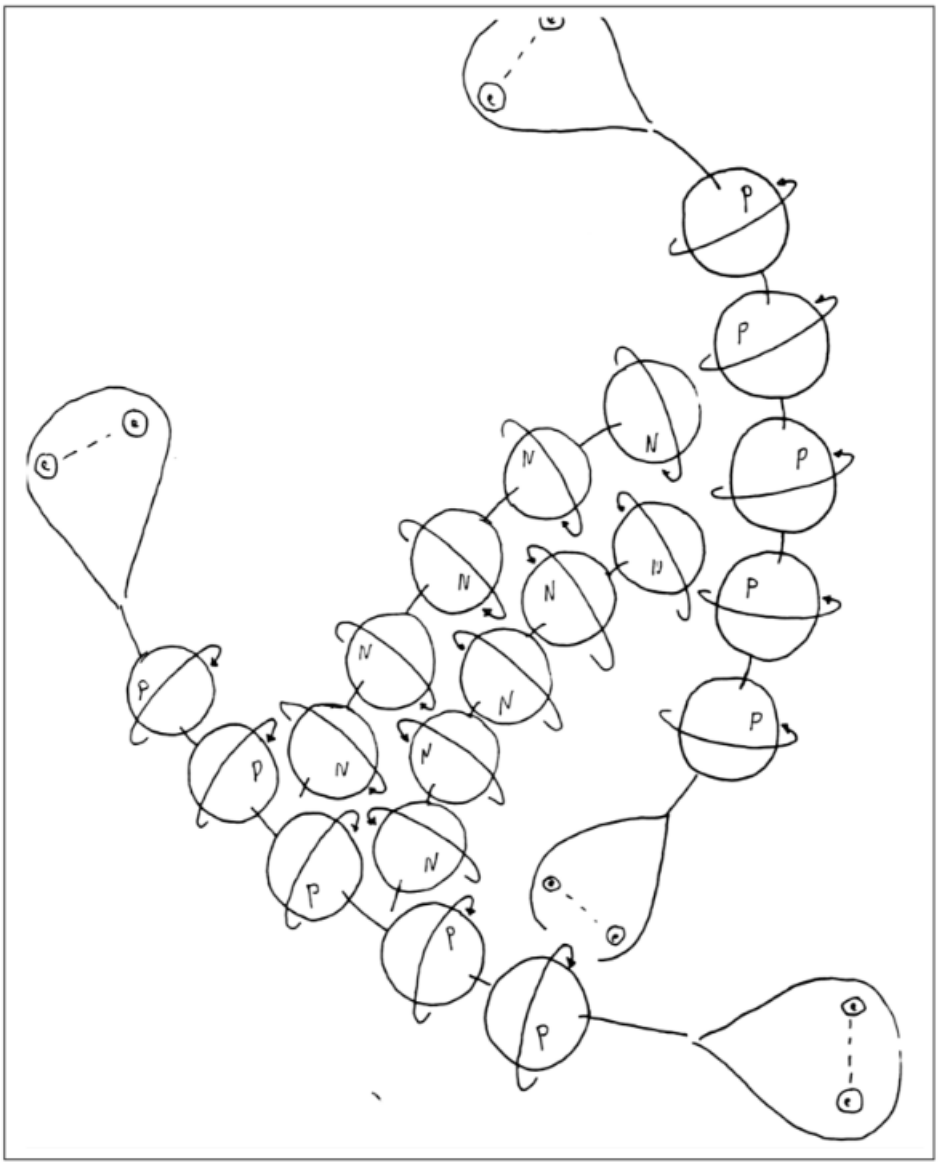

Figure 2.3: The Neon Nucleus

Key: P represents the positive side of a proton, and N represents the negative side of a neutron.
Explanation: Neon is much like carbon in its organizational structure. The main differences are found in the length of the neutron "torque converter" core and in the length of the proton line-bonds. The extra length of these proton line-bonds, when combined with the appropriate positioning of the neutron "torque converter" allows the proton line-bonds to project two electrons into each p-orbital. Hence, the element becomes totally inert to covalent bonding type reactions.

mentioned in the second row. There are likely to be structural differences in this third row however. It is thought the neutron line-bonds are coupled together differently to stabilize longer proton line-bond lengths. Concurrently, this insures structural stability of the core, and it maintains the integrity of the p-orbitals. For example, In argon, with its proton line-bonds of nine nucleons in length, six rows of neutron line-bonds would be needed to preserve p-orbital filling as it has been envisioned. With twenty-two neutrons to fill these six rows, each row would contain 3.666 neutrons, an answer which the author is obviously not comfortable with. He devises the argon core as having a centered double neutron line-bond of seven nucleons in length, and two exterior neutron line-bonds of four nucleons ln length. These shorter neutron line-bonds are thought to be located two protons back from the ends of the proton line-bonds. In this manner, numerical integrity is preserved in the periodic schema, and the proton line-bonds gain a method of curving, or collapsing inward to preserve atomic compactness. This method of calculating the placement of neutron line-bond structures works well with elements numbered thirteen to eighteen in the periodic table. **Fig. 4**

With the resolution the internal structure of these larger organic elements, the structure of the cationic elements which occur in the upper left hand side of the periodic table (Na, Mg, K, Ca) may be explained. We can assume instantly these elements bear a resemblance to the structure of their respective noble gas predecessors, neon and argon. Included in the core of this structure is likely a one or two nucleon length proton line-bond. Therein, these proton(s) become enclosed within and arrayed perpendicular to the doubled neutron line-bond torque converter. The stability of this configuration is founded on principles which are similar to the ones which impart stability to the helium nucleus. The resulting cationic behavior of the core occurs because the vectors of the central proton(s)' spin are encapsulated by and out of synch with the vectors of the fll1ed p-orbita1s. The loss of the centrally located proton's attendant electrons would therefore be easily precipitated[3].

Two unique elements we have passed over are lithium and beryllium. Of these, lithium is the easiest to understand. Its configuration is thought to be similar to two overlapping helium nuclei, with, in actual structure, a three nucleon length proton line-bond being intersected by two two nucleon length neutron line-bonds. Beryl-

[3]see figure 8.22

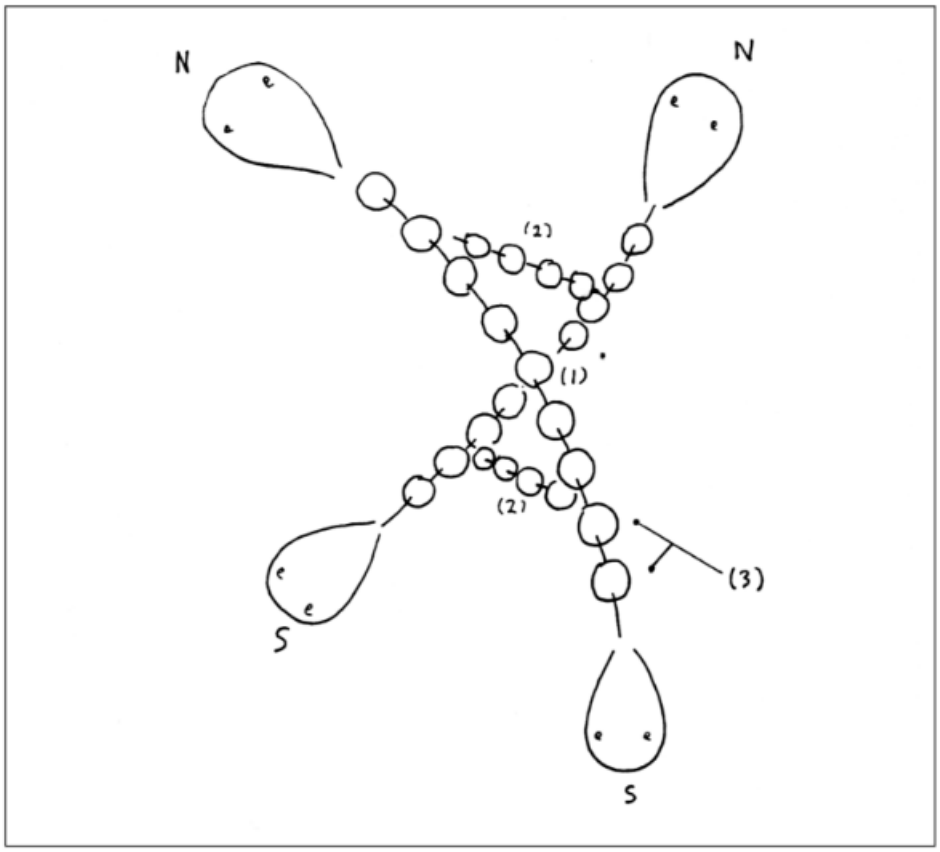

Figure 2.4: The Noble Gas Argon

Key: (1) shows where a double seven neutron torque-converter is obscured from view.(2) shows extra neutron bridging, and (3) show two of the protons which donate p-orbital electrons. Explanation: The noble gas argon is thought to consist of, firstly, two proton line-bonds of nine nucleons in length, of, secondly, a double seven neutron torque-converter, and of, thirdly, two neutron line-bonds of four in length. Because there are twenty-two neutrons in this element, it is also possible the torque converter is a double six, with five nucleons on each of the outside bridges. The outside bridges are placed in the mechanism so as to insure there are two electrons available for each p-orbital. This allows the element to be classifiable as noble.

lium is thought to have a five nucleon length neutron line-bond with two two nucleon length proton line-bonds dispersed on it. There are some doubts as to the feasibility of this second configuration, as it results in a atom which is not compact.

2.3 Medium Size Atoms

To understand the organizational schema which explains the structure of medium sized and larger atoms, it is necessary to deduce the maximum length of proton line-bond structures. There are some clues we can follow. We know the maximum proton line-bond length we have so far encountered is nine. This length was found in the argon nucleus. We may also note how the two noble gases which follow argon down the last column of the periodic table are themselves multiples of nine. Furthermore, the completion of the first f-orbital series (which occurs right after these two noble gases) results in the element hafnium, which is a multiple of nine. Let us then assume the maximum proton line-bond length is nine, and let us also assume the elements in the center of the first d-orbital row of the periodic table are either the result of building three rows of proton line-bonds, or are the preliminary result of a schema which ultimately results in the building of four rows of nine nucleon length proton line-bonds. In this connection, we have already noted how the argon structure began to have a third row of protons built in it as we progressed past potassium and calcium in the periodic table.

While cobalt is the next atom whose atomic number is a multiple of nine, and rightly should be the next atom to be examined, the author is unsure about its internal structure. However, the element which sits to the left of it in the periodic table, iron, is easier to understand. The atom's bipolar magnetic property is the key to this understanding. In structure the atom is seen as having three parallel proton line bonds. These all have the same direction of rotation, and are buffered from each other by a stacked "Y" shaped torque converter mechanism. There must be seven of these four neutron mechanisms stacked on top of one another, if we are to coincide with the number of neutrons accounted for in the periodic table. Because of the parallel arrangement of the proton line-bonds, the element gains the powerful magnetic properties we associate with it. **Fig. 5**

The noble gas krypton is next to be considered. It may be

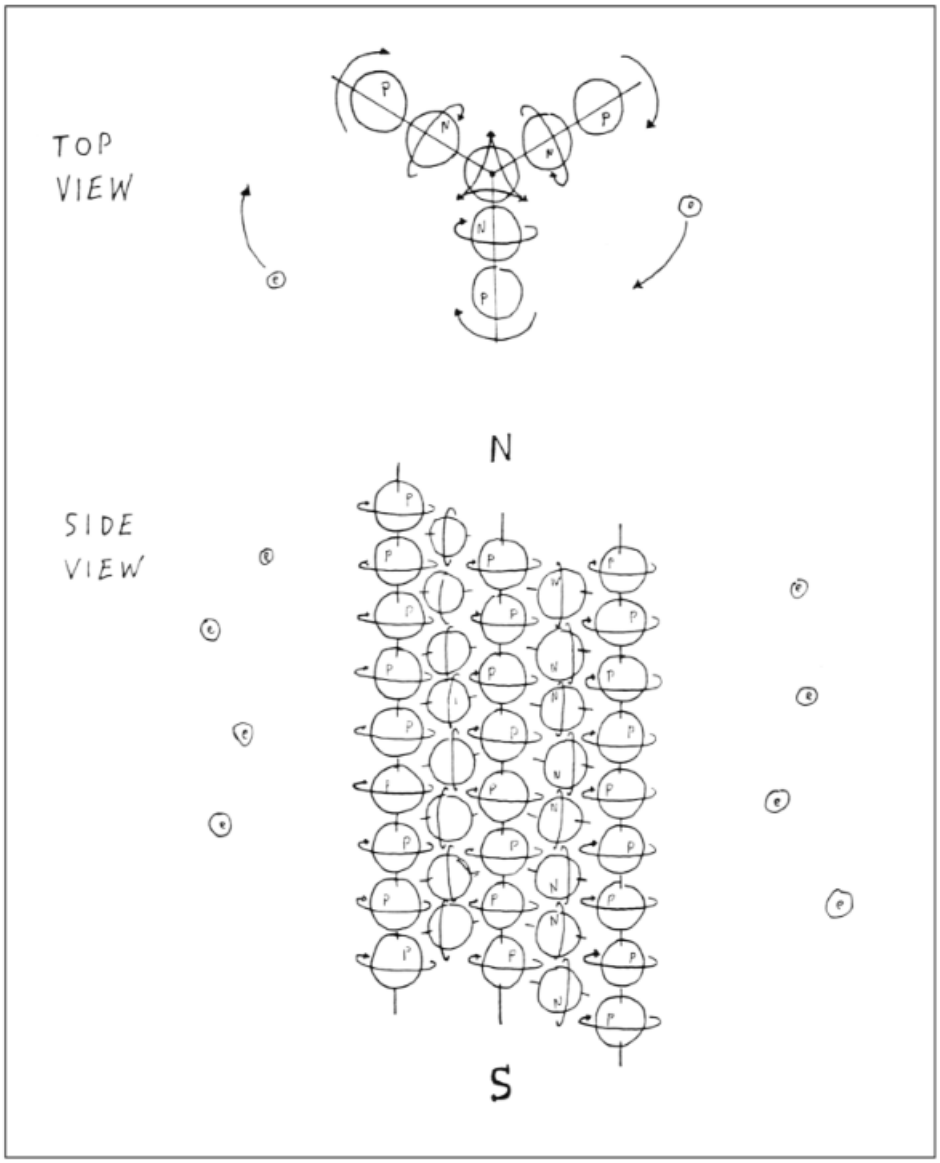

Figure 2.5: Magnetic Polarity in the Iron Nucleus

Key: P represents the positive side of an proton, N represents the negative side of a neutron, and the large symbols N and S are magnetic polarities.
Explanation: The circular rotation of the proton line-bonds along a parallel axis results in an atom which exhibits the distinctive bipolar magnetic properties of iron. Of note is how the neutrons form a "Y" shaped torque-converter mechanism. The central neutron of each subunit of each "Y" torque converter mechanism buffers movement from its three outer neutrons, and provides mechanical stability in doing so. Also note how helix type twisting of the atom's structure would allow for compaction of the atom's size.

seen to be an element composed of four full length proton line-bond structures. In operation, these four proton line-bonds must work to preserve the filled p-orbital status of the element. The author believes this occurs by the deployment of two doubled proton line-bond substructures which are then coupled by a neutron torque converter mechanism. The doubled proton line-bond substructures are themselves likely "torque-converted" by a line of eight inter-dispersed neutrons. Therein, the substructure would have to be twisted into a helix shape to help preserve its three-dimensional stability. P-orbital filling would be provided by the electrons associated with the protons which occur at the ends of the doubled proton line-bond structure. The bridge between the two substructures may be seen to be made of four rows of eight neutrons, as this coincides with the total neutron count. **Fig. 6**

In the fifth row of the periodic table elemental structures become increasingly hard to determine. There are more and more possible combination from which a probable result can be obtained. However, we may approach the noble gas xenon with some confidence. The author sees it as being similar to krypton in schema, the exception being the placement of two triple proton line-bond substructures between a torque-converter type bridge. The schematic of each of these two triple proton line-bond substructures can be understood by the reexamining the proposed internal structure of iron. With the addition of a torque converter structure between the the iron atom, and with the addition of two neutrons within each of the iron-like substructures, the schema is complete. **Fig. 7**

2.4 Larger Atoms

By this time, the reader might be wondering about the point of continuing this increasingly probabilistic argument. What else can be learned? Well, the existence of a theorem which allows us to suggest the maximum proton line-bond length is nine and gives us rules concerning the interaction of these line bonds, forges a tool to examine structural problems which occur at the upper reaches of the periodic table.

Let us start by noting these unsaid ground rules. Firstly, proton line-bond substructures follow inertial patterns. The movements of the system are in concert, so to speak. Therefore, the magnetic of these substructures' proton line-bonds oppose their formation, and furthermore, only proper phasing of the proton's

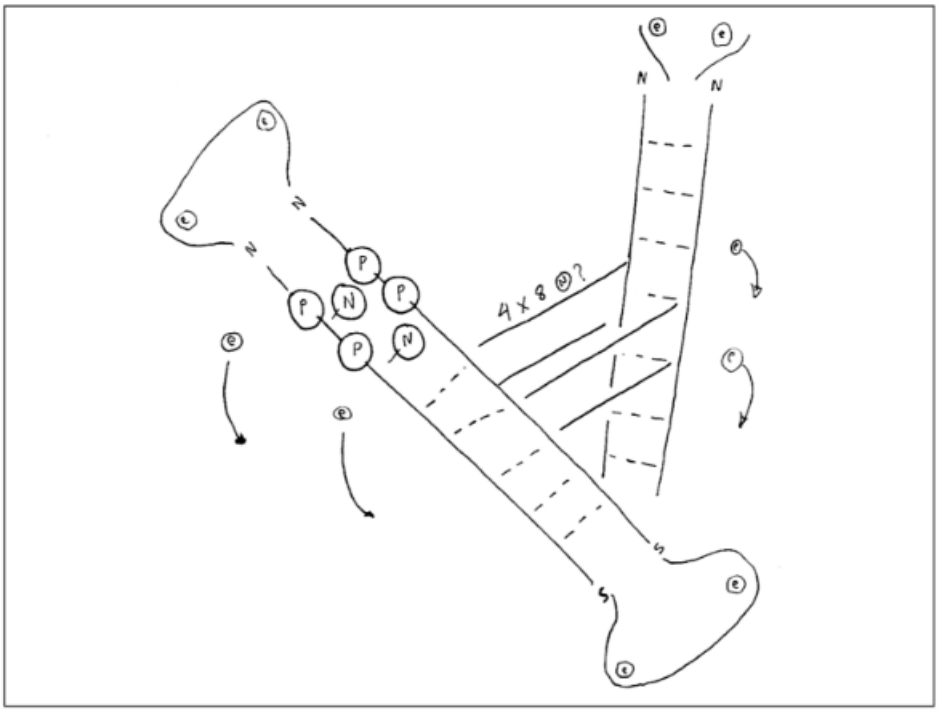

Figure 2.6: Aspects of the Krypton Nucleus

Key: P and N, when circled, represents a proton and neutron, respectively. S and N, when not circled, represent magnetic polarities.
Explanation: The krypton nucleus is thought to be built out of four complete sets of proton line-bonds. These four sets are arranged to preserve the filled p-orbital structure of a noble gas. The above schema is proposed as a starting point. Note how the two double proton line-bond substructures would need to twist about the neutron intermediaries like a helix to preserve compactness.

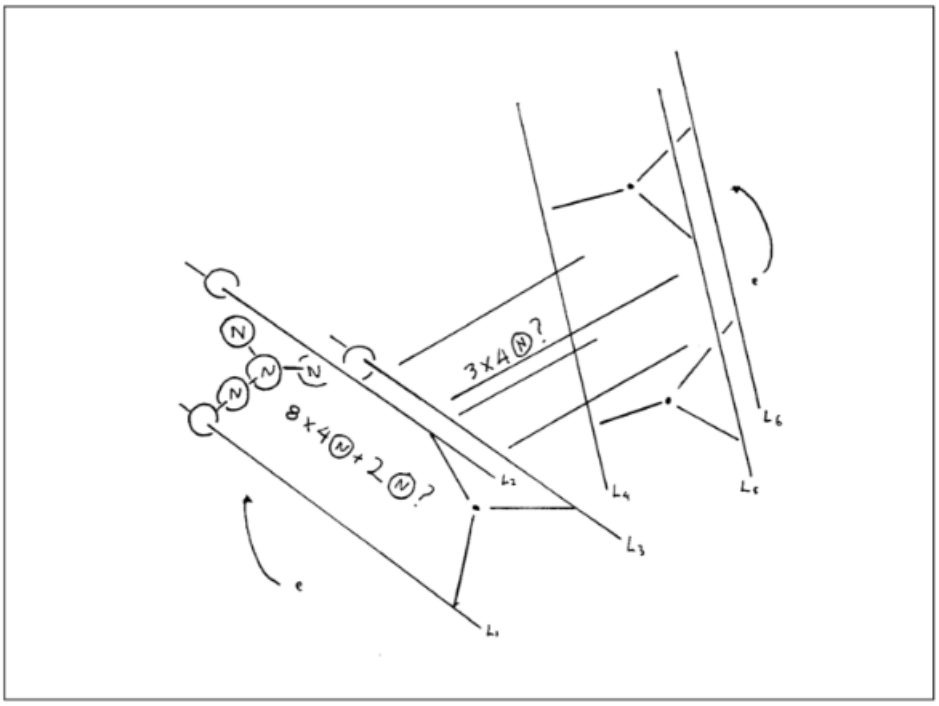

Figure 2.7: A Proposed Schematic Outline Of The Xenon Atom

Key: N represents a neutron, and L_x represents a proton line-bond.
Explanation: The xenon atom must incorporate six groups of nine proton line-bonds to follow our theoretical formulations. The above diagram shows the most probable arrangement of these six proton line-bonds. In essence, the xenon atom is like two iron atoms which are coupled through a neutron bridge.

electrostatic quarks allow close parallel alignment of the adjacent proton line bonds. However, the building of substructures is allowed to occur because the large size of the substructures results in a decrease in the rotational speed of the neutrons, and hence in weaker magnetic fields. Also, the nearly one directional rotation of the electrons around the substructure allows the temporal negation of the proton's electrostatic forces. This combination of forces plays an important role in the development of the f-orbital series. First, note how the xenon atom has become a large awkward mechanism: It requires stabilization. One method of stabilization is to add structural stays. Of necessity, these are made of proton line-bonds. They extend between and across the substructures of the atom. These "stays" follow the inertial bonding patterns of the substructures and are, therefore, aligned across the substructures according to like magnetic polarities. The addition of two of these stays completes the f-orbital series in the sixth row of periodic table. Lutetium 71 is the last element of the sixth row of the periodic table to receive a f-orbital stabilizing proton. Note how Hafnium 72 is both dividable by nine and the start of a new orbital series. **Fig.8**

With the achievement of stability in the first f-orbital series, the periodic table again shows the growth of d-orbital based patterns. This time, the extra d-orbital protons would most likely form into quaternary proton line-bond substructures. Some of the rarest and most stable of elements arise from this growth. The culmination of the sixth row's d-orbital series growth results in Radon, a noble gas. This element may be seen as having two substructures of thirty-six protons each, a "torque converter" type neutron bridge, and two stabilizing proton line bonds of seven protons each.

The growth of exceptionally unstable elements begins with the advent of the f-orbital series of the seventh row of the periodic table. What is the reason for this? To answer requires noting what happens in the growth of the proton line-bonds of the second f-orbital series. Note how, in the first f-orbital series, the sequence was seen to construct two "stabilizers" to reinforce across the proton line-bond substructures. The growth of a second set of stabilizers across the still unoccupied counterpoints of the first set therefore seems reasonable. However, there is a problem. Whereas the first set of stabilizers depended on the mechanics of inertial pairing, the rotational direction of the proton line-bond substructures disallows complete inertial pairing for the second set of stabilizers. One end

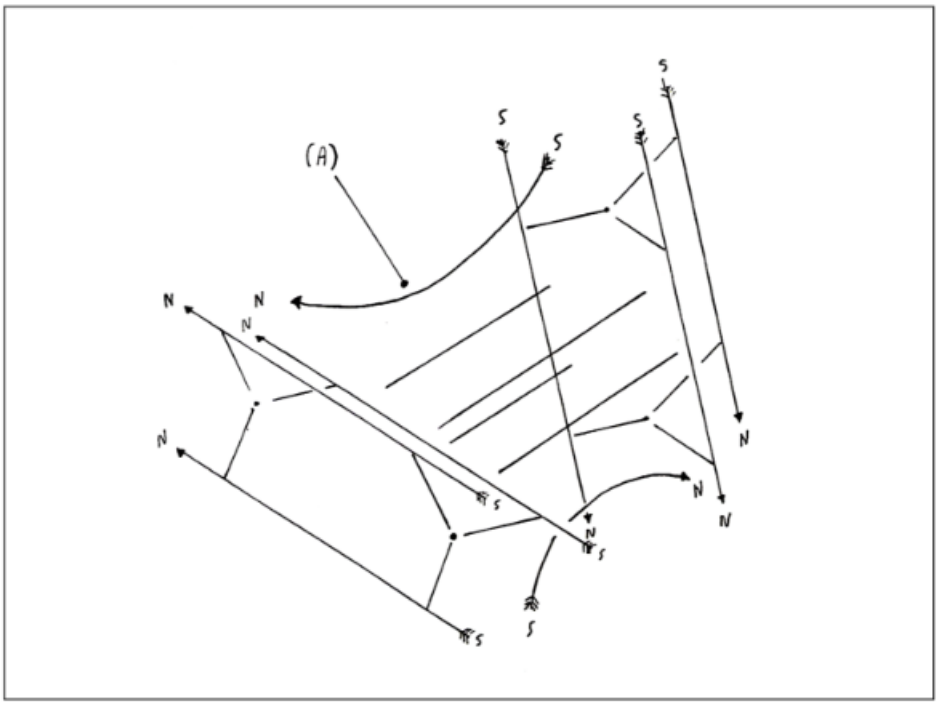

Figure 2.8: Structural Stabilization Of Larger Elements

Key: The indicator (A) points to a f-orbital filling proton line-bond stabilizer. Explanation: In atoms larger than xenon, a new orbital filling sequence occurs. Specifically, the f-orbital series must be traveled before another d-orbital series can be addressed. In the above diagram is shown a schema for this f-orbital filling. Therein, proton line-bonds form stabilizers between the proton line-bond substructures. These stabilizers are paired through electro-mechanical forces with the proton substructures. Accompanied with the subsequent growth of the next dorbital series, the stabilizers allow the most stable of elements to occur.

of each of the second set of stabilizers must form a magnetic bond with its respective substructure, and this destroys symmetry. The loss of symmetry may result in a structural flaw which can only be resolved by radioactive decay. **Fig. 9**

One argument which can be used to help verify the organizational schema we have envisioned is to consider how its execution in the final f-orbital series will result in an atom with the proton weight of one hundred and eight. No element of proton weight over one hundred and seven has yet been found.

2.5 In Defense of this Thesis

The negative reaction I have received in the circulation of versions of this thesis has caused me to write a short defense of its validity and relevance. This defense deals with the philosophy of knowledge, and shows the cognitive basis from which I have developed this thesis. It also examines some of the practical technologies and insights this thesis is giving in the scientific world. I ask the reader to bear in mind this thesis is small part of my work on the electromechanical machine analysis of atoms, molecules and biological structures. To fully grasp the importance of this individual thesis, one must study how I have used it in my chemical and biological studies.

To begin judging the value of this thesis, I ask the reader to consider how an atomic physicist would solve this everyday problem while using the logic their discipline has equipped them to use? As an example, lets look at a large fast food chain's novelty item. This item, called a crazy beachball, is actually a conventional beachball with a small heavy mass pocketed along the surface of its sphere. When thrown, this ball acts insanely and amusingly - it exhibits non-Newtonian type movements. The question is how would you conceptualize and categorize this movement? There are two mutually exclusive ways to approach this problem. Obviously, a mechanical engineer, recognizing he is dealing with a structure (a pre-bias), would set up analyzing the forces of air, weight and time with the aim being to predict the movement of the beach ball. A modern sub-atomic physicist however, thinking he is dealing with a particle, would have to take a different approach. Because mechanical interpretations are not permitted, he or she would say we know if we know the beachball's position at a certain time we can not know the direction of its velocity (the uncertainty principle).

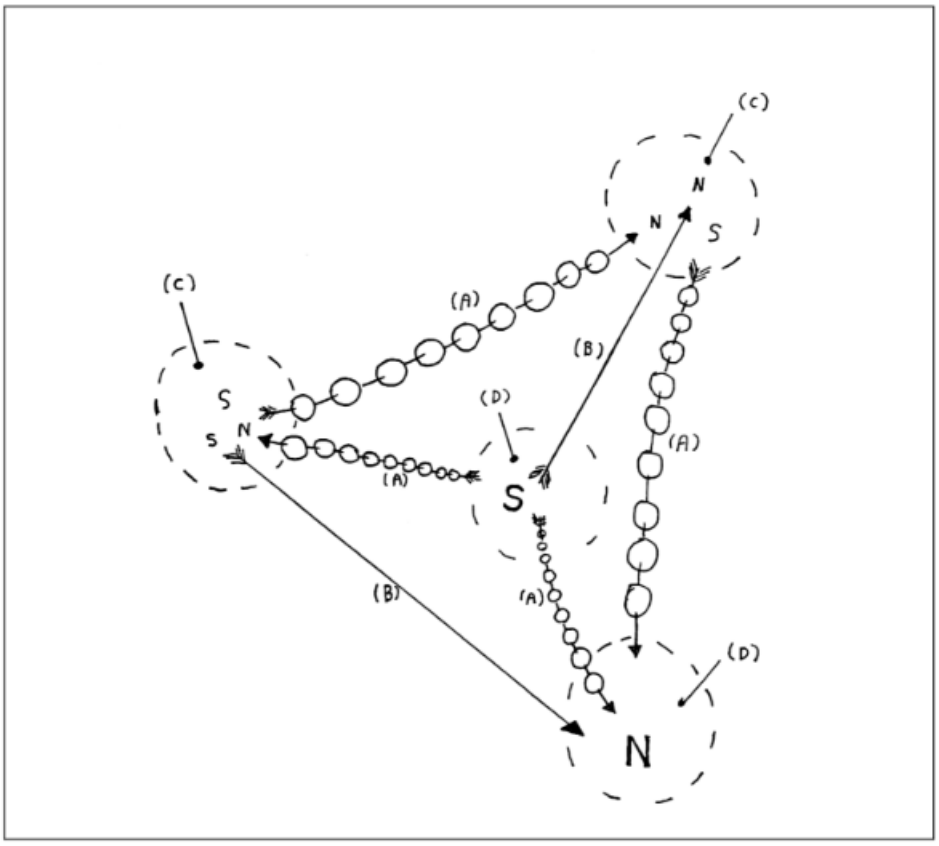

Figure 2.9: Structural Contradictions In The Largest Elements

Key : The indicator (A) shows a proton line-bond stabilizer, and the indicator (B) shows a vector representation of a proton line-bond substructure. The indicator (C) shows an area where only magnetic fields hold the proton line bond stabilizer to the substructure, and (D) shows areas which are held together on mechanical inertial binding principles.
Explanation : Radioactivity appears to be the result of a structural contradiction which occurs when the mechanical principles of inertial binding are compromised. The compromise occurs as the proton line-bonds fill the second set of f-orbitals. In doing so,they are positioned like the stabilizers of the first set. However, this second set does not quite fit the geometry of the system. One side of the set is able to bind with inertia like both sides of the first set, but the other side must bond magnetically. Hence, the circumstances are set for structural decay.

But perhaps he or she would trace its flight, and categorize it accordingly. The next step would be to break it apart and further categorize what it is made of. He or she would perhaps apply observations about spin to help solve this problem. The truth is what appears to the outside observer, the atomic physicist, to be crazy non-newtonian mechanics, appears to the inside observer, the mechanical engineer, to be a response to the interaction of several newtonian systems at once. Which way of thinking is better? Which way should the student be taught to think?

To answer these questions, let us look at the structure of knowledge, and examine the techniques used in these very different methodologies of thought. To solve the beachball problem, today's nuclear physicist would compile data upon data about the "crazy beachball". The physicist would work hard to develop a pool of first order empirical observations. From there the physicist would begin to piece together a second order theoretical proposition. The physicist would use his or her third order philosophical (a.k.a. mathematical or categorical) knowledge to do this. If the observer is an ardent believer in form before function, he or she would first categorize his findings into distinct groupings of flight patterns and compare these groupings with other known groupings. Categorically, it would appear the physicist has found a new fundamental piece of nature. His discovery, the non-newtonian crazy beachball, would be classified as a new particle. The method he uses is that of categorization, a very honorable method of thought. However, If this categorically correct physicist wishes to go further, to determine the flight algorithm of the beach ball -the mechanics of which it flight happens - he would have to resort to firstly smashing the particle into smaller parts, to find the operators or component parts, and then to matrix mathematics with operator or component functions which describe the mechanical parameters by which the structures interact. By defining traditional mechanical operators, he will have to in many ways ignored the precepts of quantum physics, and this is the essence of my argument. The engineer would have assumed this was a mechanical response. He or she would apply this third order philosophical knowledge (or bias) to first order empirical observations, and to standard second order theoretical concepts of how things work. He or she would develop a specific machine theory of the unbalanced beach ball, and check to see if the projected results co-align with the empirical observation. He or she would thereby refine this theory of machine operation.

The engineer would have said the task is not to classify through categorization, but to explain through mechanization. The task is not to pick things apart, but to put them together.

In truth, categorization and electro-mechanical analysis are connected ... the process of categorization must work hand in hand with the process of analysis of machine-like function. In any scholarly discipline, I do not believe one method of intelligence should gain precedence over the other. When this happens stagnation is likely to occur. It will seem there is nothing left to be discovered. Such is the case in atomic physics right now. As one of my critics noted; "Research on the properties of the atomic nucleus - a field once on the forefront of knowledge - has been slowing because of the vast accumulation of knowledge in that field". Continuing, the review of this paper he says "Yet this paper is written as if most of this progress had not taken place, as if the properties of atoms, for example, contained great mysteries to plumb."(Anonymous review quote)

The properties of atoms do still contain great mysteries to be plumbed, but the use of methods of categorization and classification will no longer reveal them to you. We must now press on and develop electromechanical machine theories of the atom and its small constituents, and in doing so, we will likely make new inroads in our physical understanding. The bone I have to pick with those at the helm of modern atomic physics is one of methodological oligarchy. As scientific thought is a dialectic, with categorization and mechanical analysis being the opposites by which this discipline is conducted, why has the dialect of categorization rose so strongly into ascension in the field of subatomic physics? Why have we worked like slaves, trying to break the atom further and further apart, always categorizing the new findings, but at the same time making no inroads into showing how the atom, or the nucleon or any smaller part must work in a mechanical concert to achieve its larger structure? We have missed some key attributes of the particle, and, in doing so, we have precariously upheld the advancement of the chemical, biological, and medical sciences.

How have we done so? First consider a few of the fundamental problems of these subordinate sciences. Biologist can not yet explain the "life force", the mechanism by which DNA and proteins behave in a very organized and machine-like fashion. In biochemistry, the scientist spends countless time and wealth charting the geometric structure of an enzyme, but then cannot explain how the

enzyme contains, directs, and expresses its energy. The chemist, meanwhile, must use biological processes like gene manipulation to build large chain molecules out of shorter ones. Are these signs we have not yet fully grasped the fundamental properties of the elements? I think so.

This study of elemental structure shows how there exists two lines of magnetic continuity through the core of covalently binding atoms. These lines start and end at different p-orbitals. This contrasts with "conventional theory, were the protons and neutrons play no role in the atomic properties except to provide some electrical charge at the center of the atom."(Anonymous review quote).

The importance of magnetic continuity through p-orbitals is found by studying the subordinate sciences. The phenomena, when applied to DNA energetics, for example, can be shown to allow DNA itself to be considered in terms of electromechanical machine function. The net result of this is the various "behaviors"of DNA/chromosone, e.g., strand dissolution and chromatic condensation, are attributable to machine properties which result from this magnetic continuity. This biological information has important ramifications for the future of medicine. In chemistry, the knowledge of magnetic continuity in p-orbitals is beginning to be used to develop reaction systems which use magnetic polarization of covalent bonds. We now know how to array magnetic inductors onto a reaction substrate, and this holds great promise for eventually creating systems which imitate enzymes to create lengthy peptises in bulk. No one should underestimate the importance of this paper. It is a harbinger of many things yet to come.

One of the criticisms of this paper concerns it lack of mathematical formula to correspond to its mechanical interpretations. It is like the author has taken the first step, but has not followed through. However, a point by point analysis will show I have worked to explain the transitional points which occur in the structural growth of elements. The atlas predicts these points, and these points are very important for understanding the mechanism. As for estimates of the rotational speeds of various parts of the mechanism, this information may be garnered by observing the spectral absorbtion patterns of the elements. Rotational speeds of the structural elements correspond to frequency absorbtion patterns. Why else would there be absorbtion spectra in the elements? Many other problems I have left for the new generation of physicists to divulge. I am a general theorist who specializes in the machine analysis of

geometric designs, not an atomic scientist, and I make no apologies for inadequacies of my skill set.

2.6 Questions and Answers

Q. What is an "electrodynamic model" of the atom?

A. An electrodynamic model of a atom is a mechanical representation of the arrangement of neutrons and protons within the core of the atom. The model tries to explain in terms which are cognizant with Maxwell's equations the structure and internal workings of the atom. This presupposes the belief the internal workings of the atom are somehow electro-mechanical in nature and this mechanism is such that it allows the orbital electron shell patterns predicted by quantum mechanics. The models should show how energy, magnetism, electrical charge, momentum, the strong and weak forces all work in concert to allow the creation of an atom.

Q. How does this compare with the quantum mechanical model of the atom's nucleus?

A. The quantum mechanical model is firstly a mathematical depiction of the electron shell's waveform characteristics. This mathematical system, once derived and refined, was then applied to the core itself. The quantum mechanic's idea is since the electrons follow waveform shell patterns so must the interaction of neutrons and protons as they mash about within the core. This paper questions this claim. By stopping the clock and creating physical models, we will look at the atom's core as a discreet mechanism. Perhaps this will help to understand how the dynamic waveform characteristics of the atom's core and its shell comes into being. The idea is to better understand the energetics of the atom's nucleus, as this has some importance to chemistry and biology.

Q. Why should we look at simple electrodynamic models when dealing with the atomic, molecular, and subatomic worlds? Aren't mathematical models like quantum mechanics more scientific?

A. These electrodynamic models appear at first as visual approximations of Maxwell's equations. However, the field equations presented in this paper are complex "non- classical" mathematical models whose historical roots are directly traceable backwards through Einstein's special relativity to Maxwell's "classical" equations. These field equations use the underlying mathematical theorems of special relativity to create general relativity equations. They predict specific constants and limitations as part of their operational criteria, and these allow for the non-classical physics and the typical atomic behaviors codified by quantum mechanics. In terms of process, the complexity of the field equations has required the development of vector based electrodynamic models in atomic physics, chemistry, and biology. The electrodynamic models are more than approximation of Maxwell's equations; they represent the first steps in understanding the complex dimension space of the unified field equation. Their scientific value should not be underrated.

Q. In terms of the electron shell, is it possible we have overlooked important atomic properties by relying so heavily on quantum mechanical models? Show an example of how electron shell models are clarified through the study of an electron's electrodynamic properties?

A. An example of this is found in the study of spin orientations in covalent bonding. Simplified, Pauli's Exclusion Principle say the spin of the bonding electrons must be opposite to one another. What does this mean in electrodynamic terms? Figures 2.10 and 2.11 show how two electrons with spin characteristics which are unlike in terms of their atomic focus $(\uparrow, \downarrow)$ are aligned as if they have the same spin structure when they bond covalently. We see how this allows the magnetic polarity of the electrons to align during covalent bonding. Therein, the two electrons are kept apart by the repulsing nature of the magnetic alignment, the non-sympathetic rim rotation of the electrons, and the electrostatic repulsion of their like charges.

Q. If the diagram one is correct, then does a filled p-orbital (two electrons) from one atomic focus have opposite $(\uparrow, \downarrow)$ or similar $(\uparrow\uparrow), (\downarrow\downarrow)$ spin characteristics?

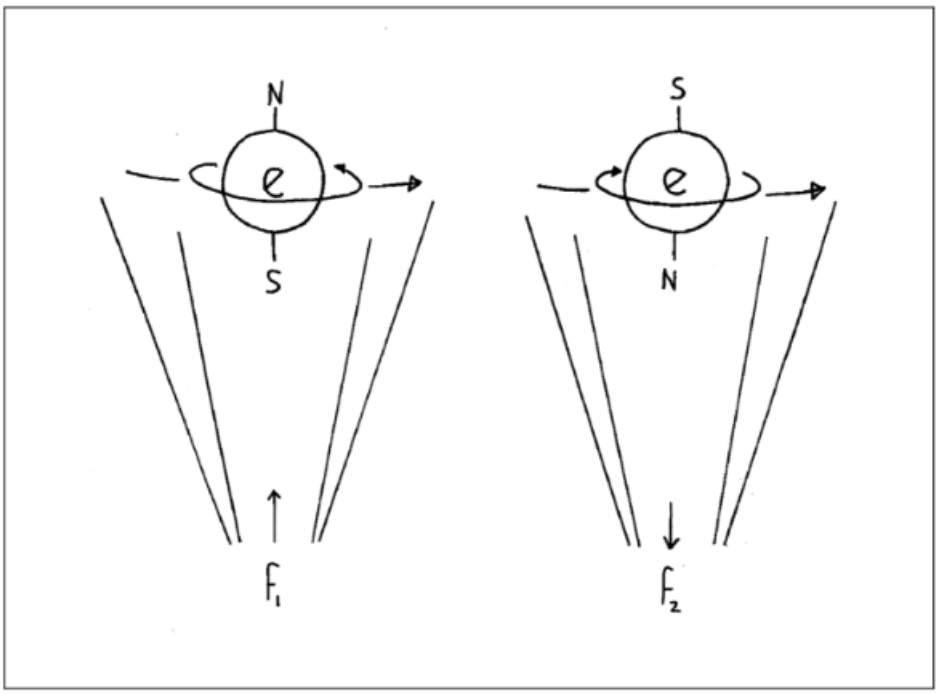

Figure 2.10: Contradictions in Pauli's Principle?: Plate A

Subtitle: (A) An Electrodynamic Model of Two Electrons With Opposite Spin Orientations
Key: (f_1) and (f_2) represents opposite spin orientations in terms of their atomic focus. N and S represent magnetic polarity, and circular arrows represent spin directions. E and B represent vectors from Maxwell's equations.
Explanation: An electrodynamic model of the pairing of two electrons with different spin designations $(\uparrow, \downarrow)$ shows how Pauli's principle calls for the creation of covalent bonds with magnetic continuity through their axis. This follows the precepts of Maxwell's equations, provided the nucleus itself uses a $\boldsymbol{B}$ field to generate a circular $\boldsymbol{E}$ field. However, if an autonomously filled p-orbital also follows this electrodynamic pattern, then the spin orientations of the two electrons in it would have to be $(\uparrow, \uparrow)$ or$(\downarrow, \downarrow)$. Does this contradict Pauli's principle?

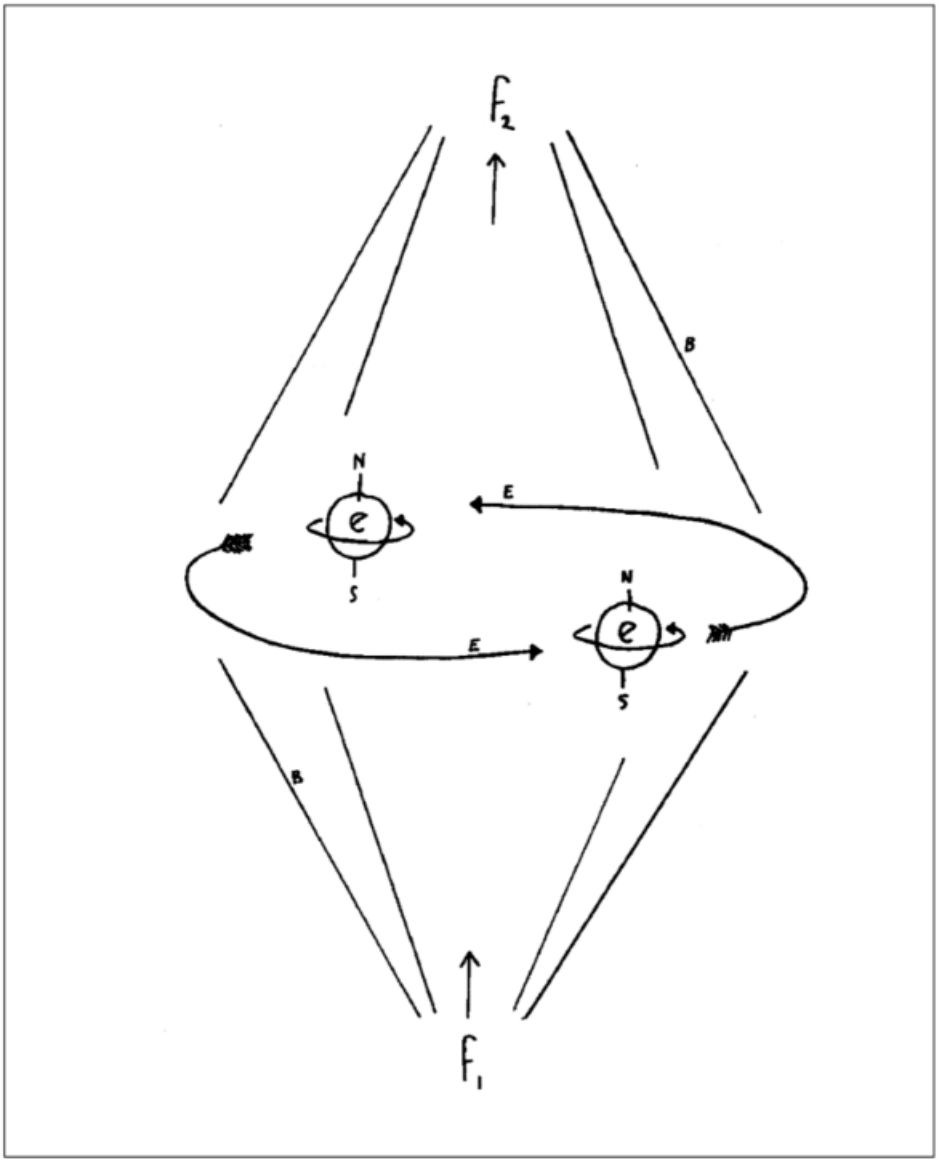

Figure 2.11: Contradictions in Pauli's Principle?: Plate B

Subtitle:(B) Dynamics of Covalent Pairing
Explanation: When bonded through a p-orbital, (f_1) and (f_2) now share the same polar attributes. This fits both Maxwell's equations and Pauli's principle. Hence, a atom which fills its own p-orbitals would need two electrons with the same spin designators. In covalent bonding, two different spin designators are required.

A. For the electron pairing pattern pictured in figure 2.10 and 2.11to be correct in terms of electrodynamics, and for the magnetic polarity of the spin axis to co-align in both the filling of p-orbitals and in covalent bonding, then the subatomic structure of an atom must create a circular **E** vector field in the p-orbital binding zone. An orthogonal **B** field which matches the electron's magnetic spin axis will cause this. Maxwell's equation $\nabla \times \mathbf{E} = \partial \mathbf{B}/\partial t$ is the identity in use. Provided only one or two protons direct energy to this vector field, the electrodynamic behavior typified by Pauli's exclusion principle will occur. In this sense, Pauli's exclusion principles may reflect more on the internal structure of the nucleus than on the behavior of the electrons in the shell.

Q. What obvious clues are there to the structure of the nucleus?

A. The most obvious clue to the structure of the nucleus is the simple observation positively charged protons repel one another and would tend to lie on the outer reaches of the structure. They must be arranged in such a way as to minimize force between each another. In the case of organic atoms, these protons must also be arranged so as to produce four distinct p-orbitals. The neutrons by default of their neutrality should tend toward the center of the atom. They must somehow allow the protons to coexist and achieve their orbital structure. Most important, the arguments about electron spin structure presented last section gives us clues about magnetic polarity in a covalently bonding atom. It can be argued if electrons projected into a p-orbital have a magnetic polarity of one type then there must also exist an orbital with opposite magnetic polarity. In terms of a covalent bonding atom, this means there must be two North covalent bonds and two South polar covalent bonds. This incidentally allows the correct number of electron spin orientations to occur within the structure.

Q. Where else is there information to be used in developing an electrodynamic model of the atom?

A. There is an incredible amount of information on protons, neutrons, up quarks, down quarks, the strong force, the weak force, the electro-weak force, the periodic table, magnetic theory and so on. Certainly any model we develop must be compatible with these theories.

Q. Can you explain the internal workings of a small atom?

A. Let us reconsider the neon atom. This model shows a basic schema for nuclear structure in p-orbital type atoms. The first aspect to talk about in this model is the proton line-bond. As

shown in the model, the protons are bonded axially along their magnetic poles. This configuration allows the existence of four p-orbitals in the structure. As the two protons line bonds are located roughly 90 degrees to each another, they project the associated electrons in distinct zones. There also exists in the center of the structure two neutrons line-bonds which run parallel to one another in the center of the nucleus. These carry energy and stabilize the two proton line bonds. Note how the neutron line-bonds act like a "torque converter" between the proton line-bonds. One point which cannot be overemphasized in this model is **p-orbitals have magnetic continuity**. This is shown in the following chapters to be a critical turning point in our understanding of biology.

Q. This model points to areas which we may associate with the strong, weak or electro-weak force. There are three zones of energy interaction in this association; nucleon linebonding along the magnetic axis, neutron line-bond to neutron line-bond biaxial pairing, and the proton line-bond to the neutron line-bond bridge interconnection. Can you explain in more detail the mechanics of the fundamental forces?

A1. The Weak Force and Biaxial Bonding

Understanding what biaxial bonding forces are in quantum mechanical terms requires the refinement of the atomic model into its subatomic components, namely quarks. When thought of as particle made of sub-particles, a proton or neutron shows a structure with alternating bands of positive and negative charge along its meridian. The charges of these bands correspond with the types of quarks present in the nucleon. An up quark gives an area of positive charge, whereas a down quark gives an area of negative charge. In neutron to neutron biaxial pairing three conditions occur; mechanically sympathetic spin orientation between the two neutron line-bonds, a magnetically attractive end union between the two line bonds, and the coordinated charge phasing between the positive and negative quarks of the two separate line-bonds during rotation. Proton line-bonds would be precluded from this type of association because of their net positive charge. This type of electrodynamic union seems most representative of the weak force.

A2. The Strong Force and Line Bond Formation

The strong force seems related to the process of line-bonding itself. To understand this process, we must add several notes to the nucleon electrodynamic model mentioned last paragraph. A starting point is to note quarks have spin, and to ask if it is possible these

sub-particles do not stop spinning when they form up into neutrons and protons? If true, this should be particularly true in protons, as the structure seems at first to be mechanically impossible because of its net positive charge. But if the quark's spin allows the quark's actual charge area to move about within the quark's area of the nucleon, then this movement would have to occur in a way sympathetic to the other quark's charge movement patterns. This is one way the nucleon could develop a measure of internal stability. As this stability extends toward the others in the line-bond, the moving electrostatic field of one quark mediates the energy of adjacent quarks in the line bond. It appears the strong force not only binds the quarks to each other in neutrons or protons, it also shifts axially on a temporal basis to electrostatically align neutrons to neutrons or protons to protons. These together with the very sympathetic magnetic structure of axially stacked particles create "line-bonds". In suggesting the spin based phasing of charge distribution within a quark represents the initial ability of the quark to adhere to other quarks, I am also suggesting the general propulsive force which allows spin to occur should then be considered the strong force.[4]

Another observation which bears heavily on the electrodynamics of the nucleon concerns the fact the proton is a stable autonomous particle while the neutron is not. By the above description of the strong force, even this phasing of charge movements does not seem enough to make the proton such a stable particle in comparison to the neutron. One wonders if the magnetomotive principle or the Hall Effect is at work? Consider how the movement of an electronegative charge through a magnetic field with a plus spin direction causes a magnetomotive force perpendicular to the axis of the spin. Consider also how this force seems selective in terms of charge; the negative charges are forced away from the spin axis. The positive charges are consolidated toward the center. While this aids the cohesion of the quarks in the proton, it also causes the strong force to be insufficient in the neutron. Once a certain breakout energy is reached, an electron is released and the neutron becomes a proton. Does this cause the difference in the stability of the neutron and proton? It seems only a development of mathematics based on the electrodynamic model could answer the question concretely.

[4]See discussions in chapter four, Sub-Baryon Mechanics, for further elaboration.

A.3 The Electro-weak Force and the Bridge Interconnection

The electro-weak force is associated with the proton line-bond to neutron bridge interconnection. This area of the atom is very interesting because it seems to be the area which causes much of the thermal characteristics of the atom to occur. It is a friction based interconnection which slows rotational speeds (hence spectroscopic absorption characteristics), and generally adds defining characteristics to the element. The connection appears to have elements of both the weak force and the strong force in it with both forces operating in a geometrically altered form from their norm described above. They create, in essence, a "torque converter mechanism."

Q. In the above description of mechanical interplay in nucleon cohesion, have you said the strong force does not exist as a fundamental force?

A. No. Mathematics in the unified field equation predicts the existence of a fundamental cohesive force as a cornerstone of the equation system. Likely, this force is the "strong force", and the behavior described above elaborates on the mechanics this force causes on what otherwise would be linear behaviors. I would tend to think "spin" is the strong force stripped to its bare essentials.

Q. What are the keys to understanding larger atoms?

A. Four points to note are the maximum length of proton line-bonds seems to be nine nucleons, models of larger atoms show new patterns of line-bond inter-association, the probability of these larger models being correct is likely inversely proportional to their size, and shifts in the unit management structure in the prototype unified field equation co-align with new patterns of orbital series growth. Smaller atoms typically referred to as the "organic atoms" are the easiest to model. For example, if a proton is removed from each end of the proton line-bonds in a neon atom and if the the neutron bridge is made one neutron doublet shorter, a model of the carbon atom is created.

2.7 Conclusions

This paper decries the need for an expansive cataloging of sub-atomic structures as they exist throughout the periodic table. The knowledge gained from such a task will benefit us in ways not yet imagined, and the task itself is in no way more nebulous then

projects occurring in astronomy right now. In fact, the comparison with astronomy is indeed warranted, as the same qualities which make astronomers good at their jobs -the ability to use deductive logic to fill in the gaps when empirical data is lacking- is required in this project.

Chapter 3

Magnetic Polarization Of Covalent Bonds

Key Words: magneto-chemistry, focused magnetic field convergence, proton line-bond co-alignment, electrically induced orbital cutting, polarization inductors, tetrahedral inductor array, molecule keying, switching sequences.

By using new information on the magnetic field structure of covalently bonding atoms, this paper develops prototypes of various new reaction systems. Shown here as representative of the new technology are a water filtration process, a high efficiency hydrogen oxygen producer, a methane to ethane batch processing chamber, a device for glucose production, and a protein synthesizer. All these devices use the focusing of magnetic fields inward unto the reaction medium with the aim being to polarize the reaction substrate. Electrical currents are then introduced (when necessary) in order to sever covalent bonds. The severing action is guided by the focused magnetic fields while these magnetic fields simultaneously hold the molecules in place. This enables a specific cutting action to occur.

The new information which makes this paper possible was derived from the study of nucleon organization within lower atomic weight atoms. Therein, it can be demonstrated how protons, when considered as planetary models, generally form into "line-bond" type structures, with a covalent area appearing at each end of each line-bond. Accordingly, the organic series of atoms have two of these linebonds. These two structures are thought to be arrayed perpendicular to each other. They are then interconnected by a doubled neutron line bond substructure. This neutron substructure acts as

a "torque converter" mechanism between the electrostatically repulsive proton line-bonds. Various placements of the torque-converter mechanism in relation to proton line-bond structures determines whether or not the p-orbital valencies are filled.

The importance for this paper of this new perception of subatomic structure is it shows how magnetic continuity exists between and through the atom's proton line-bonds. Accordingly, this paper shows how to use focal convergence of magnetic fields to employ this property in technologically beneficial ways. The intent here is to establish a conceptual framework from which both experimenting and the issuing of process patents can proceed.

3.1 Introduction

Controlling chemical processes by use of magnetic polarization of covalent bonds is a new technique in the expanding the repertoire of the chemical engineer. It is still at a very experimental stage, but it holds great promise for giving us the versatility we need to solve some difficult reaction problems. To explain the subtleties of the process, this paper will rely heavily on the use of diagrams, the clarity of which I hope the reader will find satisfactory.

One of the most contentious parts of this paper arises from the author's use of planetary models to explain the substructure of the atom. This perspective has been viewed as unnecessary by physicists who believe only mathematical modeling will do. Some think planetary models invoke to the reader the existence of classical mechanical laws at this level of perception. However, this type of modeling has been used mostly for convenience. The planetary nucleon models can be easily revised into more geometrically correct quark models, and if wished, the level of perception can be reduced even further to the sub-baryon level.

3.2 Theoretical Principles

Magnetic polarization of covalent bonds relies on focal convergence of magnetic poles. These poles point inward to a focal point in the reaction medium, with the aim being to create a large grouping of the polarized molecules. The mechanism which allows this occurrence is the bar magnet type structure of individual proton line-bonds within the atom. Since there are two of these line-bonds

in the atom's core, the process, in its simplest form, requires two axes of magnetic induction. The vectors of the two axes are not perfectly straight, but rather curve through the core. Hence, the aiming of the polarization inductors must co-align the projection of p-orbitals from within the core. The resulting tetrahedral symmetry allows the magnetic polarization to occur. Diagram one shows some aspects of the technique. Diagram two shows an idealized conception of an oxygen atom being held in place by the magnetic polarization. Notice how, in the process of polarization, the magnetic forces emitted by the polarization inductors are of a monopole direct current variety. Each polarization inductor in the tetrahedral symmetry is coupled magnetically to another inductor, the net effect being the creation of a field which matches the symmetry of a tetrahedral molecule.[1] **Fig. 1,2**

While useful for filtration techniques, tetrahedral magnetic polarization alone is not able to precipitate chemical reactions. Still required is a method of cutting the covalent bonds. This can be accomplished by the introduction of an electrical current into the medium. Therein, electrodes are placed in the reaction vessel. The direction of the flow of electrons from these electrodes are controlled both by the electrode's orientation in the medium, and by the magnetic field lines of the polarization inductors. The electrons prefer to move perpendicularly to the magnetic component. Diagram three shows the rudimentary mechanics of the cutting technique. One benefit of using electrical currents to cut the covalent bonds is it will allow the movement of hydrogen radicals towards the cathode of the reaction mechanism. This will effectively clear the reaction zone of the atom. Indeed the focal center will reject any molecule which does not "fit" its polarization zone. **Fig. 3**

The researcher must by now be wondering what magnitudes of magnetic force and electrical force must be used in the reaction mechanism to facilitate the polarization and cutting system? There is no single answer to this question. I think even very low levels of magnetic inducement will work to polarize the molecules, provided sufficient time is allowed for the molecules to drift into the appropriate polarized position. After such a time, the electrical current is introduced for a short period of time, and this facilitates the bond cutting. As with the magnitudes of the polarization fields and electrical currents, the exact switching of both the electrical

[1] The steady state field can have sub-oscillations introduced to improve keying in the reaction sequence.

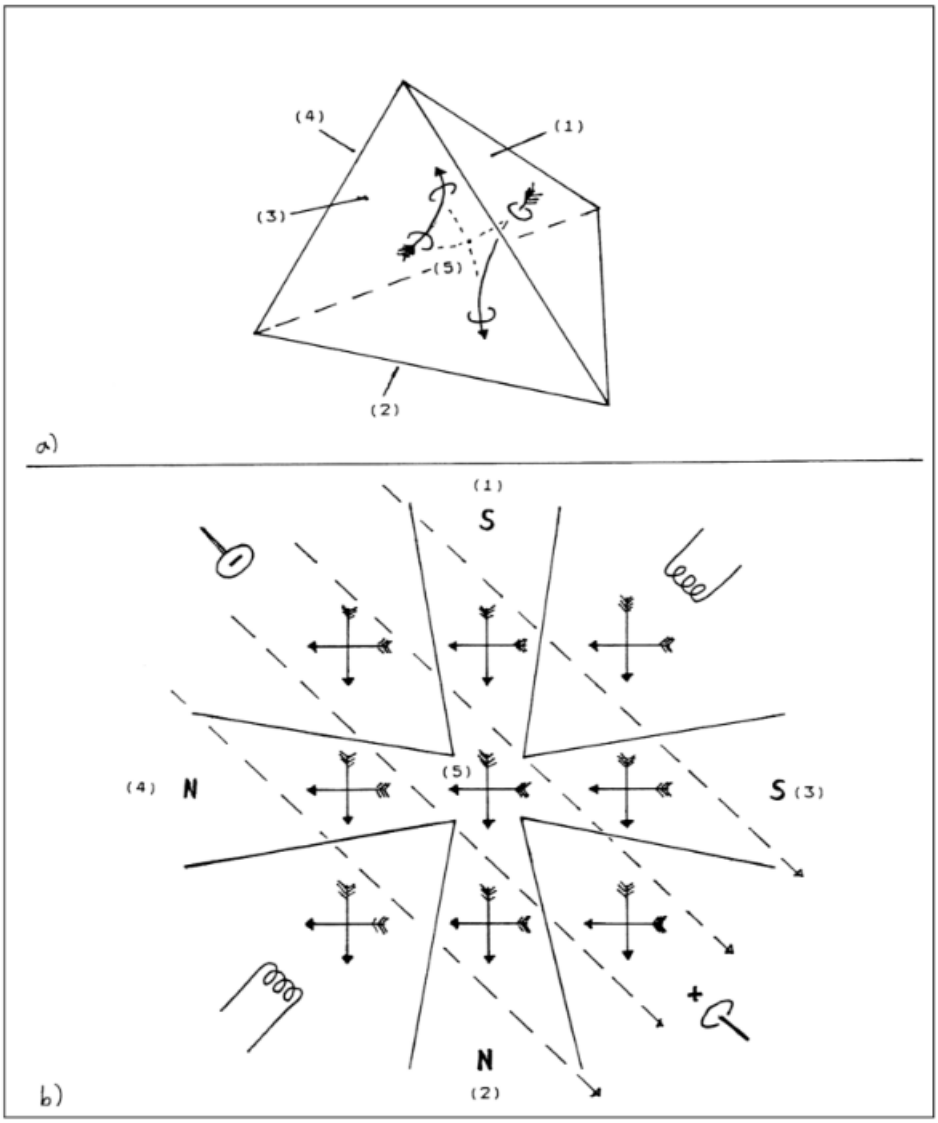

Figure 3.1: Polarization Mechanics of Double Line-Bond Type Structures

Subtitles: a) Tetrahedral Geometry b)Vector Expansion of Tetrahedral Geometry Key : (1), (2), (3), and (4) represents different faces of the tetrahedral symmetry. (5) represents the focal point of the convergent fields, the crossed arrows represent the atom's proton line-bond doublet.
Explanation: This diagram shows the conceptual basis of magnetic polarization of large groupings of molecules along their covalent bonds. The magnetic field energy of inductor array causes individual molecules to become grouped into organized clusters centered on the foci. The polarization effect is strongest at the point of convergence and grows progressively weaker as one moves away from the focal center.

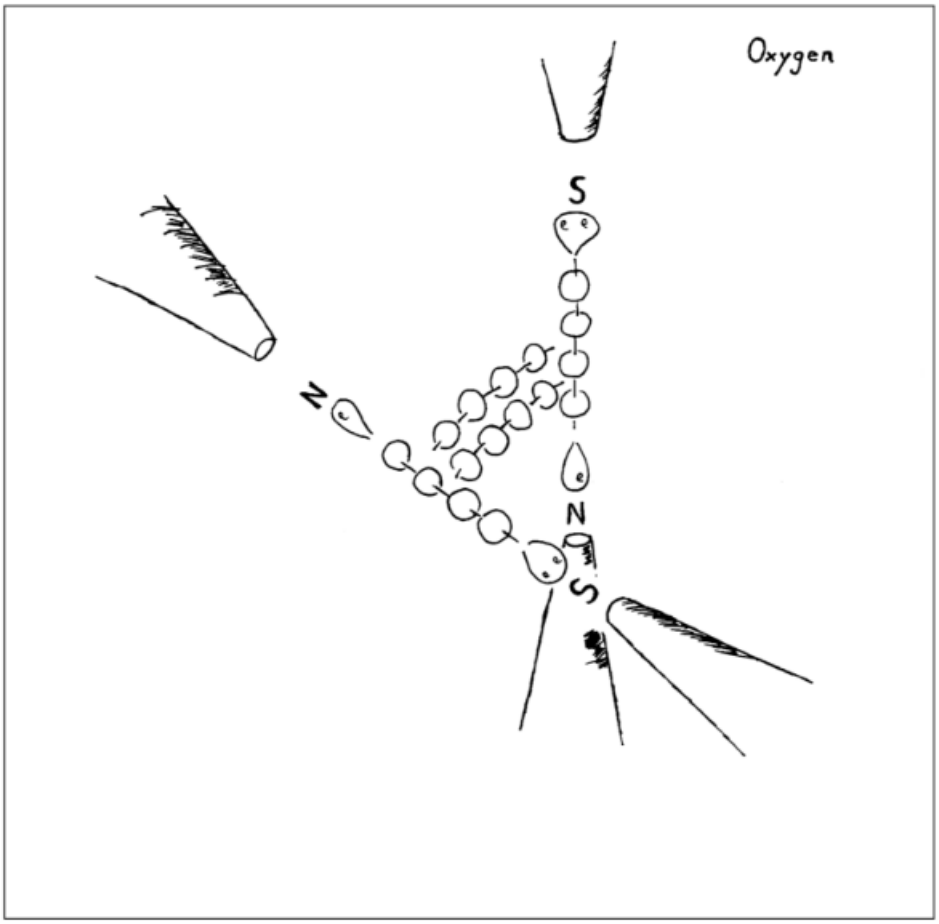

Figure 3.2: Magnetic Polarization of Organic Nuclei

Explanation: In the center of this diagram, a planetary model of the oxygen atoms is shown. The magnetic field projections of its p-orbital bonds are in line with a hypothetical array of magnetic inductors. Notice the importance of geometry and inductor polarity in building the polarization grid.

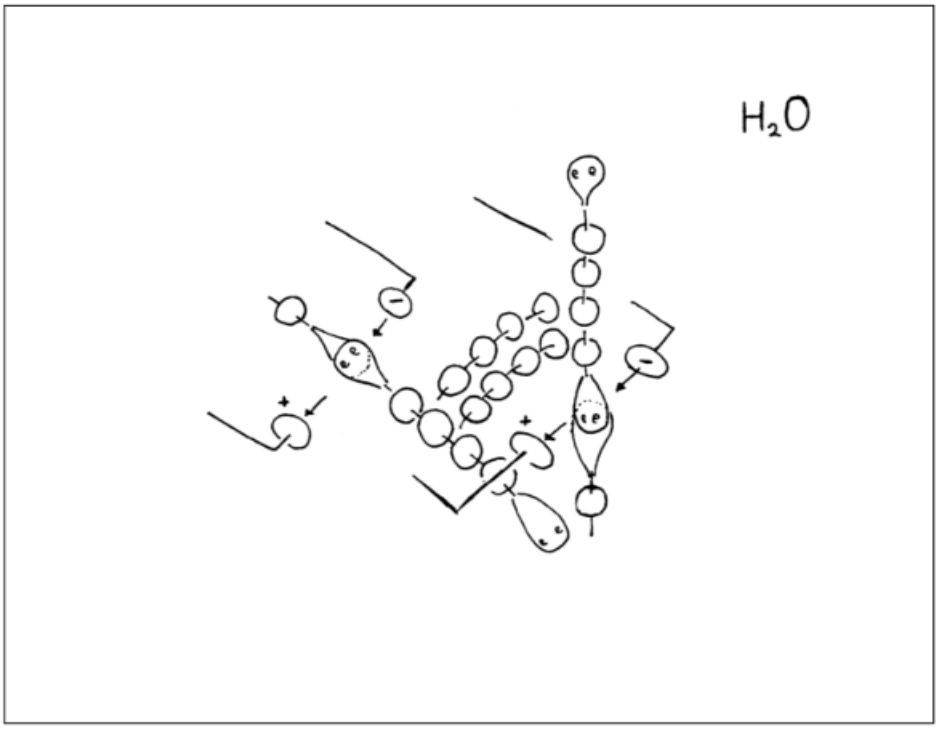

Figure 3.3: Principles in Zone Specific Cracking

Explanation: In this conceptual diagram, a polarized water molecule is subjected to electrical flows which cut across the plane of its covalent bonds. The direction of the electrical flow is guided both by the orientation of the electrodes in the polarization grid, and by the electrical dynamics of the polarizing magnetic fields. The net result of this procedure is the high efficiency cutting of the covalent bonds, and the reduction of the molecule into hydrogen and oxygen.

currents and the polarization fields relates intimately to the design of the apparatus in question. These are items which must be tailored to the processes one wishes to elicit.

3.3 Simple Processes

The laboratory set-up for experimental purposes is based on the use of rods and clamps, with the polarization inductors being machined out of a steel designed for use with magnetic fields. The inductors are shaped on a taper to help facilitate the convergence of magnetic fields into the focal zone. They are wound with copper magnet wire as required for the power source present and placed so as to focus on the center of a pyrex beaker. Every reasonable attempt is made to reduce and eliminate vibrational tendencies of the inductors, as these will blur the focus of the convergence. **Fig. 4**

One of the easiest processes to create using the magnetic polarization of covalent bonds is water filtration. The molecule has the tetrahedral symmetry which is easy exploit. In this process, the molecules are allowed to drift into the center of the pyrex jar, where the magnetic array keys them into a polarized state. The water molecules are then siphoned off. One of the problems with this technique is it will also remove other tetrahedral shaped molecules, and this may impede the water purification properties of the device. However, for processes requiring the reduction of water content, like alcohol distillation, or maple syrup production, the technique has possibilities. **Fig. 5**

Adapting magnetic polarization to electrochemical processes such as hydrogen-oxygen production from water may prove to be most beneficial. Traditionally, electrodes are placed in overturned jars. These jars collect the gas which is created as electrical current breaks the covalent bonds of the water molecules. The electrically charged gases drift toward either the negatively or positively charged electrode. This process can also be done by use of magnetic polarization of the covalent bonds. In this case the magnetic inductors polarize the molecules in such a manner to facilitate the cutting of the covalent bonds. The inductor's switching sequence must work to alternatively hold the tetrahedral water molecule, and then to release the tetrahedral oxygen molecule. One method which may work to eliminate this particular switching sequence is to have the electrode's electrical strength greater than the magnetic inductor's. The electrically charged oxygen atom would then have

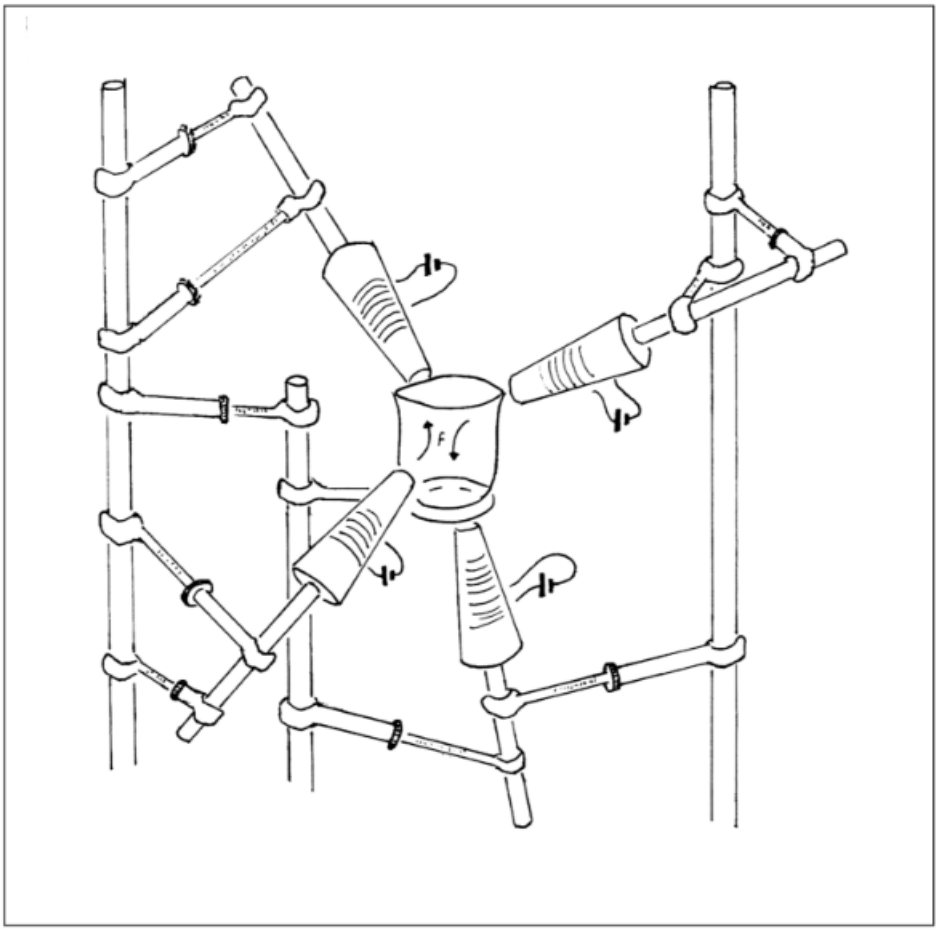

Figure 3.4: Laboratory Set-up for Experimental Purposes

Explanation: A Small scale lab set-up using "rods and clamps" is used to configure four magnetic inductors in a tetrahedral array. Each inductor is fed direct current electricity so as to present unipolar magnetic fields towards the focal center. The electromagnets have been tapered to allow more precision in determining the focal center.

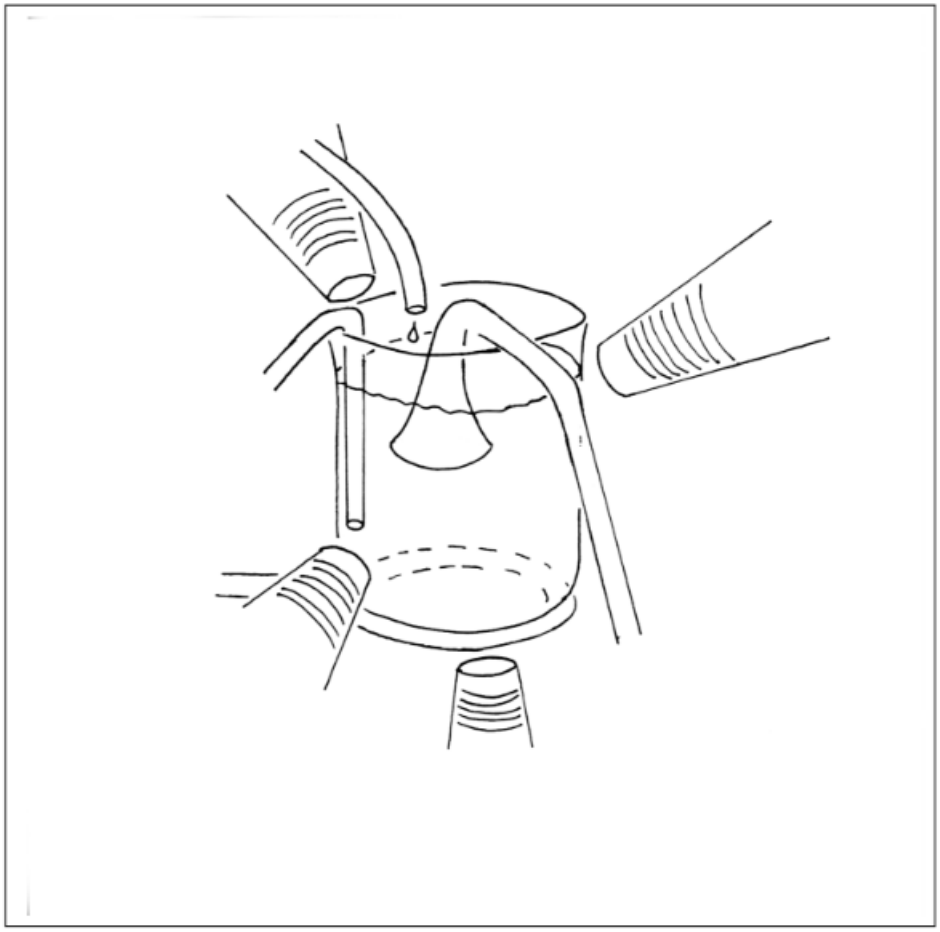

Figure 3.5: A Procedure for Water Filtration And Removal

Explanation: As shown on the above diagram, a solution which requires concentration through the removal of water is placed in a reaction beaker. The water molecule is polarized by the tetrahedral convergence and is forced into homeostasis in the center of the beaker. Exterior to the focal center, molecules such as alcohol or maple syrup can be found in higher concentrations. They do not "fit" into the polarization array. As extra reaction medium is added via the inlet tube, water is removed from the focal area of the system. Concurrently, the distillate or concentrate can be removed by modification of the product removal tube.

more propensity to move towards the attracting electrode then it has to stay locked in the grid. **Fig. 6**

3.4 Chain Lengthening

So far we have only examined processes which filter or decrease molecular size. The real challenge in chemical engineering is to find processes which increase molecular size. With the proper design of both the magnetic array and the electrode/inductor switching sequences, the magnetic polarization technique can fill this criteria. As a practical example, we will consider the process of methane to ethane conversion. This conversion will require the bonding of two tetrahedral type molecules. To achieve this end, magnetic inductors which polarize two groupings of methane are required. Once the two groupings are polarized, an electrical current must then cut the covalent bonds. This process must occur without the presence of air, of course, and so a reaction vessel must be used. One of the problems in creating two grouping of polarized tetrahedral molecules in close proximity to one another is the lack of room for the fourth inductor in each system. Accordingly, the ethane molecules are to be polarized by three inductors. The electrodes are placed perpendicular to the direction the fourth inductor would have had in the convergence zone. Diagram seven shows details of the mechanism. **Fig. 7**

Molecule keying is very important in the ethane to methane converter, since the created molecule, ethane, must somehow be ejected from the reaction center. The method devised to do this is to have the two polarized ethane groups strategically placed so when the methane is formed, the ethane groups are twisted into a higher energy state along their conjoining axis. As the molecule seeks to resolve this higher energy state, it ejects itself from the area of the polarization grid.

3.5 The Construction of Larger Molecules

Reaction systems which use magnetic polarization and which seek to build larger molecules out of smaller ones tend to lose zones of polarization. For example, the construction of a d-glucose molecule out of carbon dioxide components must rely on a single line of induction on its lengthy axis. This compares with the side chains of

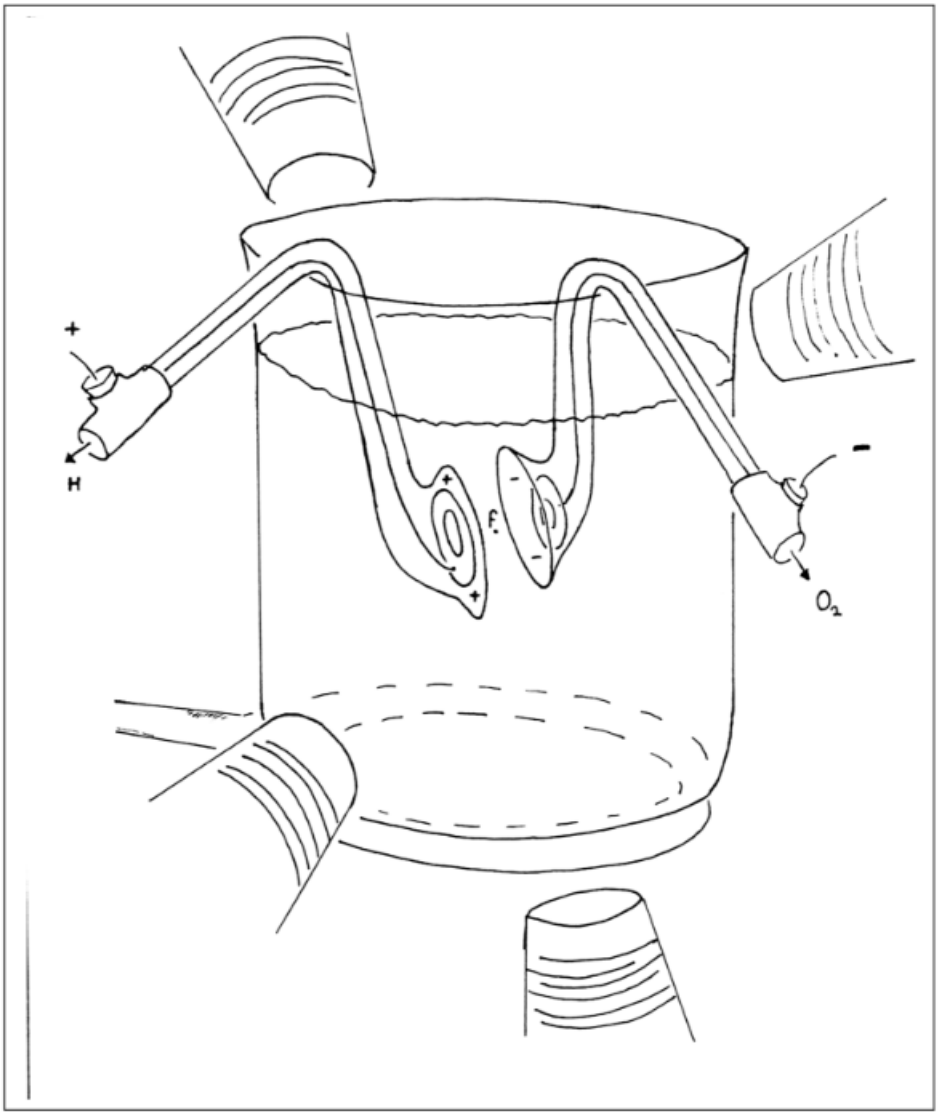

Figure 3.6: High Efficiency Hydrogen-Oxygen Production

Explanation: Shown above is a electrolysis method which uses magnetic polarization. The polarization allows the molecules to become oriented in a manner which allows cutting of the covalent bonds to occur. The close proximity of the electrodes, and the continuous flow nature of the removal configuration helps facilitate this process.

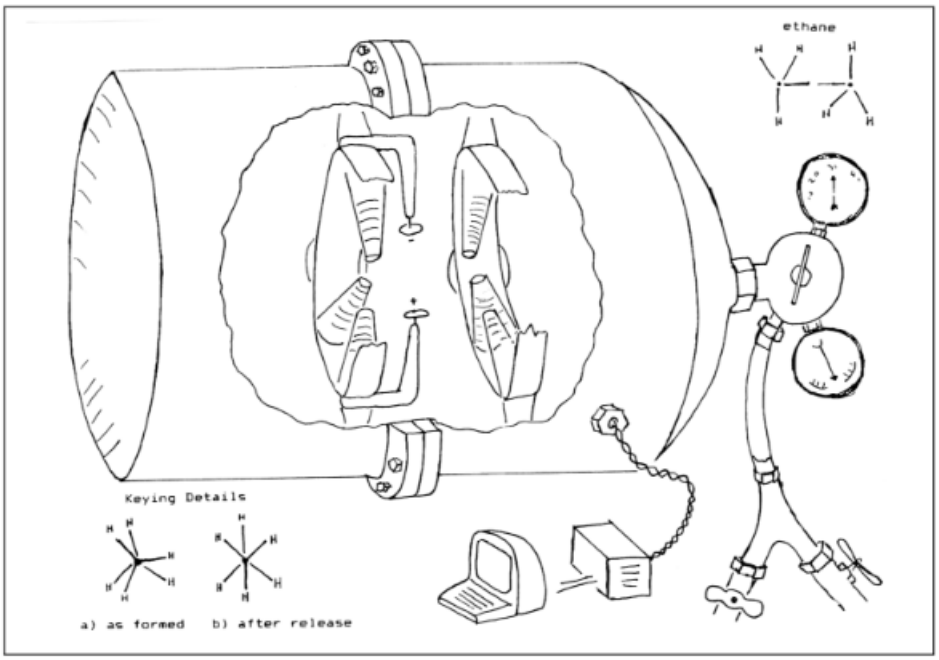

Figure 3.7: A Methane to Ethane Converter: Batch Processing

Explanation: By using a doubled tetrahedral type array within the center of a pressure vessel, it becomes possible to convert methane to ethane. The process works by polarizing two methane molecules within close proximity to one another. An electrical current is then introduced to cut the hydrogen/oxygen bonds along the axial plane of the polarized methane groupings. In the subsequent reaction, the vessel produces ethane. To eject the formed ethane molecules from the center of the reaction vessel, the ethane is formed with its axis twisted into a higher energy state. As the polarization grid is temporarily shut off, the molecules lowers its energy state and thereby no longer fit into the polarization grid.

the forming glucose where the focal zone is wider and where individual inductors may be used. However, one of the problems in building molecules of this type is determining what the polarization of side chains of the glucose molecule are. Research suggests a magnetic isomerism is possible in the formation of these atoms, but whether "reverse hand" molecules actually exists or not is yet to be determined. The point is there are several possible magnetic inductor configurations which may or may not elicit the polarization effects. **Fig. 8**

Perhaps the most difficult task of modern chemistry is the synthesis of proteins. Again, the technique of magnetic polarization of covalent bonds may prove beneficial. In the proposed reaction sequence, a generic polarization chamber is built. It has the ability to polarize discrete amino acids with its variable geography inductor array. In a process which involves keying of two specific types of amino acids, followed by electrical conduction to facilitate bonding, followed by a switching of the inductor array to facilitate keying of the next desired amino acid, a longer chain protein may be created. A diagram of a preliminary design is shown herein. **Fig. 9**

3.6 Design Considerations

An alternative to using intensification of magnetic fields to cause magnetic polarization is the use of magnetic evacuation. By winding a hollow iron core so the center of the core requires the appearance of a magnetic pole to resolve the magnetic pressure, the process of magnetic evacuation can occur. Obviously,this technique forms a interesting counterpoint to magnetic intensification in reaction design. By using it, a lower energy state can be achieved in the reaction vessel. Consider diagram ten for clarification of the idea. **Fig. 10**

This very experimental technology I have shown you has the potential of becoming a powerful new force in the twenty-first century. I have disclosed it here to encourage experimentation in it, and to establish a conceptual ground point in the literature from which the issuing of process patents can proceed.

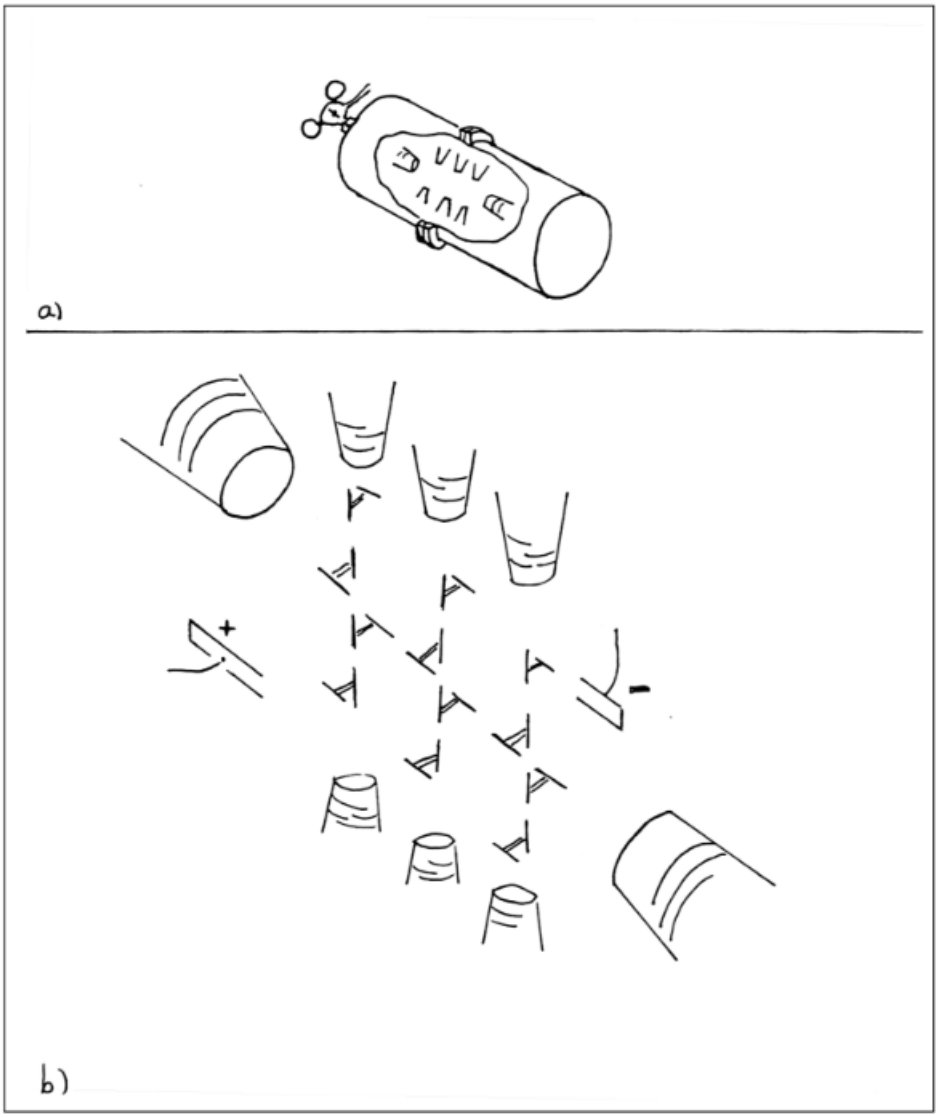

Figure 3.8: Aspects of Glucose Synthesis

Subtitles: A) General considerations B) Inductor/moleucle relationship.
Explanation: In the proposed glucose synthesizer, tetrahedral type molecules are firstly polarized along the main axis of the glucose chain. Side type polarizers further polarize the grid along an elongated focal zone. The timely introduction of short burst of electrical energy then begin the process of building the larger molecules.

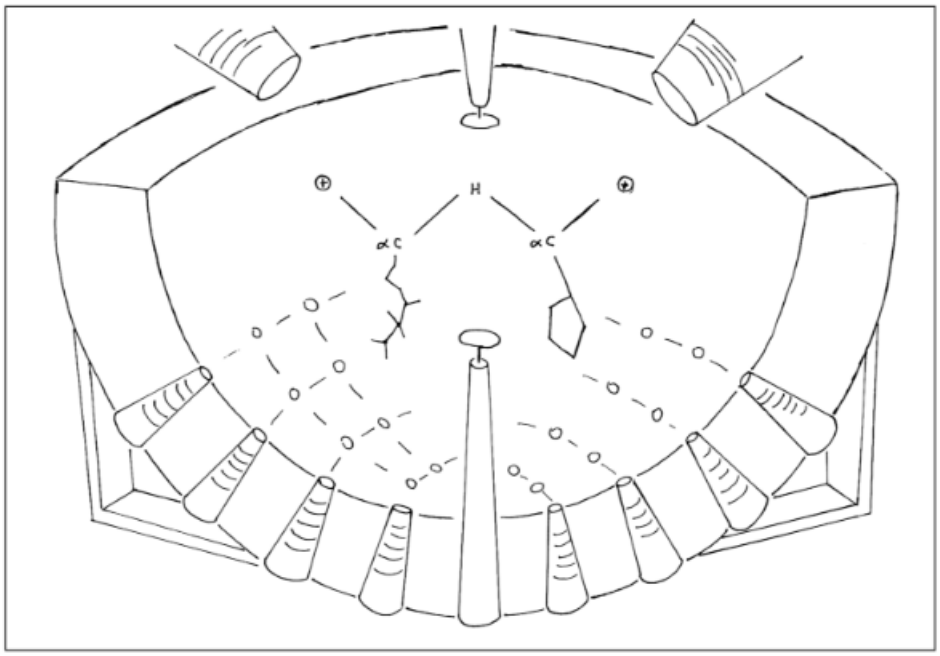

Figure 3.9: Alignment Procedure In Protein Synthesis

Explanation : A reaction vessel which is capable of producing long strands of amino acids would require the ability to adjust its focal zones to order to hold specific amino acid groups in the center of reaction vessel while bonding sequences take place. Both geographical adjustments and intensity adjustments would have to be made. A detailed study of the magnetic attributes of these side chains would have to be undertaken by anyone trying to build this type of machine.

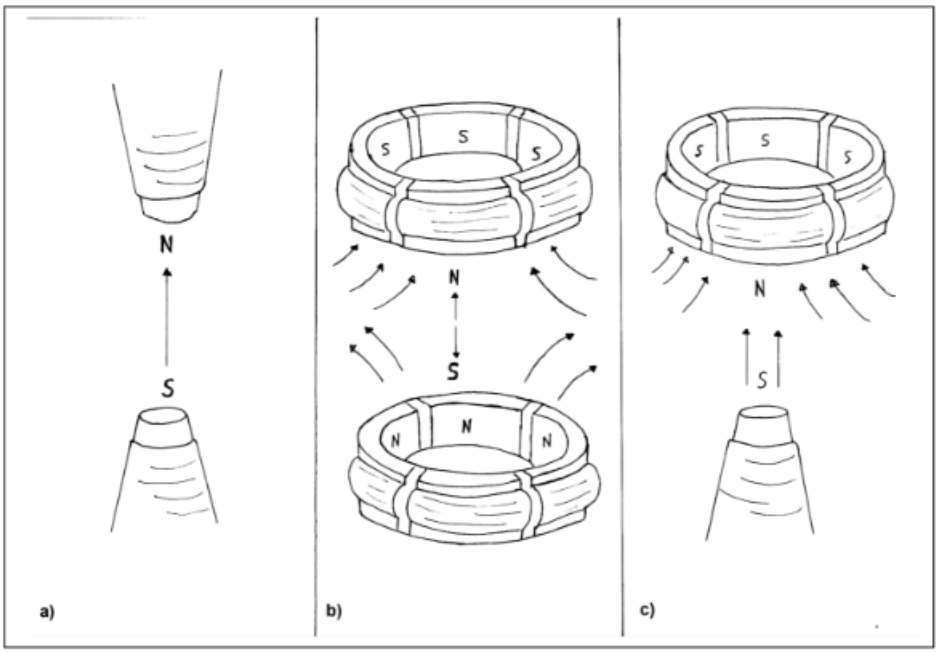

Figure 3.10: Magnetic Evacuation as a Counterpoint to Magnetic Intensification in Reaction System Engineering

Subtitles : a) High energy polarization b) Low energy polarization c) Mixed energy Polarization
Explanation: The previously described applications of magnetic energy through the focal center results in higher energy states being achieved within the polarization grid. This is not necessarily the only method of magnetic polarization. One may also reduce the magnetic energy along focal planes, the aim being to polarize the molecule while lessening its energy state. A third alternative is to combine the first two methods, and to thereby create a configuration which, overall, does not change the energy state.

Chapter 4

Sub-Baryon Mechanics

4.1 Understanding The Fundamental Force

Quantum physics is the foundation upon which much of modern chemistry has been built. With this in mind, let us consider again the postulate of a fundamental force; a force which may cause the peculiarities of gravity, electro-negativity, and electro-positivity to occur.

In order to understand the fundamental force, we shall first familiarize ourselves with the geometry of the relationships between the Chemical and Physical Science Equations, when these equations are held by the symmetry **T** of the Biological Equation. Therein, we see the fundamental precursor of gravity, round bonding, and light speed invoke the variable **M**, mass, in an equilateral manner. Taken together, these variables may be considered the fundamental force in the sense the fundamental force is a requisite of nature The appearance of a singular aspect of the variable **M** is impossible without the likewise appearance of its sister attributes. A diagram of the geometry of the mathematical equation involved is presented below. After viewing it, I ask the reader begin to consider not what the fundamental force is made of, but instead how the following variables can interact mechanically to form the fundamental constituents of matter. **Fig. 1**

In understanding the mechanics of the fundamental force, certain lessons can be drawn from the idea phasing of magnetic fields leads to areas of negative and positive charge. Recall how the convergence of like magnetic polarities leads to electrostatic areas which are trying to expel negative charges. When reacted to this

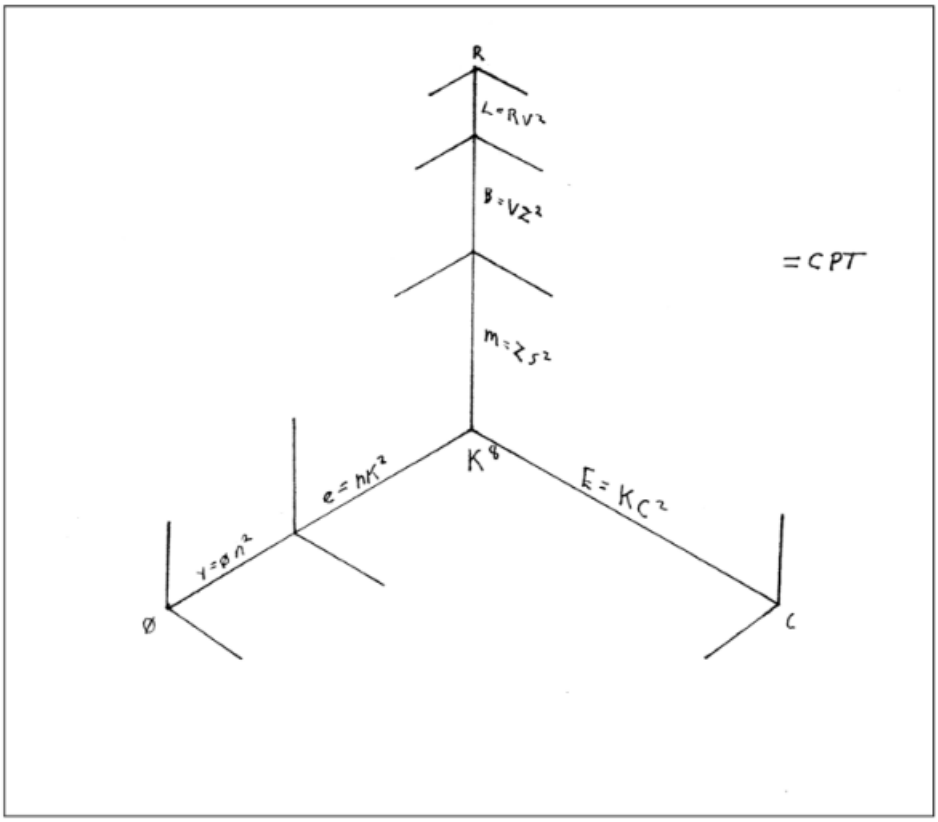

Figure 4.1: Mathematical Aspects of the Fundamental Force

state, the area of convergence may be called positively charged. Similarly, but inversely, mutually sympathetic areas of magnetic fields will lead to a situation where the energetics wish to expel an positive charge. When reacted to this state, the magnetic fields represent a negative charge. The subtleties of interaction between the reacted states in each of these descriptions is akin to the subtleties of the differences between anions, acids, cations, and bases as discussed later in this book.

For reasons which will become apparent, we will consider the charge application to be in the reacted state. Moreover, the nature of magnetic convergence and sympathies will be considered to be phasing related, with the positive charge areas being based on ninety degree out of phase arrangement of magnetic oscillations, and with the negative charge areas being based on in-phase magnetic oscillations.

In studying the phasing of field interaction and the internal charges which they give rise to, there exists a situation where the phasing is at about forty-five degrees, and where, thereby, the charge results are neither positive or negative. In the micro-world of quantum mechanics, this type of phasing must satisfy energy conservation requirements, and since the answer can not be exclusively expressed as Webers or electron volts, the most probable assertion is mass, e.g., gravity displacement, is the end product of the forty-five degree phasing interaction. Energy is mass if it is not charge. The propriety of this answer is reinforced when one considers how the other two phasing systems must exhibit a boundary of some sort if they are to become entities in the quantum realm. In this situation, an attempted change in phasing of the zero or ninety degree systems would be accompanied by mass changes which prohibit and/or limit the ability to accomplish the transition. Therein, the stability is gained to create a particle system which is not to be classed as a representative of a virtual force, but instead of real forces. The three distinct phasing states are themselves suggestive of distinct quantum states.

The particles which are best represented by the peculiarities of the electromagnetic association mentioned above are the up quark for ninety degree phasing, the down quark for zero degree phasing, and the charmed quark for forty-five degree phasing. Note that this correlation is the result of comparison between the actual mass and charge of these particles. Consider the following diagram which explains the above concepts, and note the phenomena represented

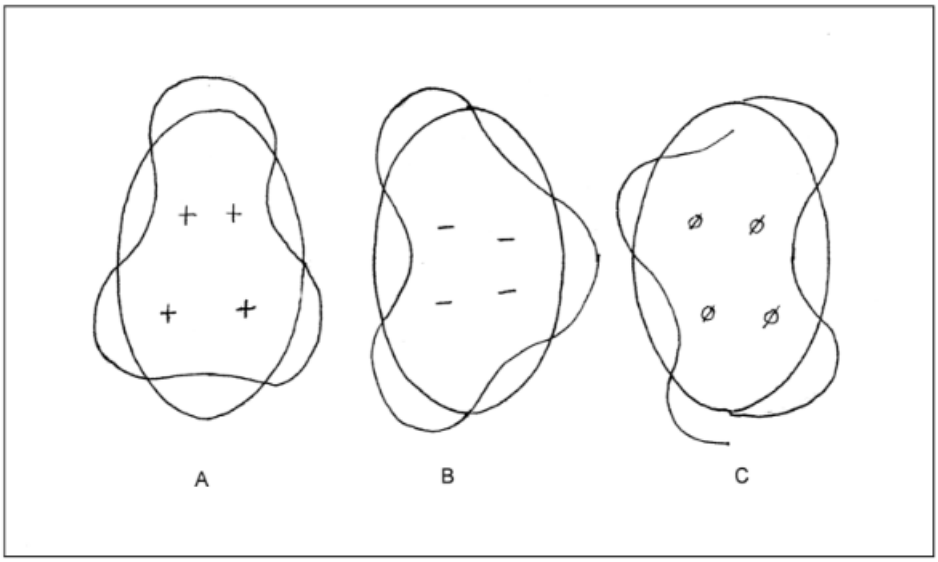

Figure 4.2: The Electromagnetic Field System of the Fundamental Force

A) 90 Degree Out-Of-Phase Particle Ring System (A Positive Quark)
B) An In-Phase Particle Ring System (A Negative Quark)
C) A 45 Degree Phased Particle Ring System (A Gravitating Charmed Quark?)

is the electromagnetic component of some mechanical action which is not yet explained. **Fig. 2**

Two questions which may be asked of the quark's proposed electromagnetic structure are: With the phasing being zero degrees in the down quark, would this cause the structure to be compressive, and to thereby break into more and more minute components of a negative charge? Similarly, would the up quark be expansive and hence grow larger and larger so as to disperse as diploidic waves? The answer to these questions would be a yes if the mechanics were considered independently of secondary motor activity. Secondary movement allows the structural basis of electrons, photons, and the magnetic "sea" to be established. The end products have mechanical properties which insure their stability.

4.2 The Neutrino Subunit?

The electromagnetic portion of quarks needs to results from a mechanical action which is occurring at the beneath the quark level. The nature of this action appears in the atlas to be premeditated by variables of gravity (ϕ)) velocity (C^2), spin (R), and the precepts of general relativity. Diagrams may be constructed which allows us to view the nature of the fundamental mechanism. A particle type has been assigned to invoke this fundamental mechanism, and I ask the reader to note that the "suspected" particle is a neutrino. Its purpose is to stabilize the system. The basis of this assertion is the postulate that neutrinos are capable of the light speed. This allows it to act as the basis of a light speed mechanical system. However, I am somewhat hesitant in stating this, because while the machination is understood, the exact position or role of the neutrino in carrying out and/or participating in this machination is, because of the lack of empirical information, not unequivocally known. Moreover, at speeds greater than light, we no longer think of motion as empirical speed, but instead as time rates compared to time rates. This means neutrinos must "time travel" after the speed of light is passed, and therefore, this also means parts of the quark structure are subject to disappearance from the present time, when the quark is rendered into a free particle. In the diagram presented, the particle's tumbling path is flattened by its movement at light speed and we see its frequency characteristics. **Fig. 3**

In studying neutrinos, the curious thing is they are of three different types, each type being a harbinger of a different family of baryon type particles. This would suggest they have an internal mechanism of their own. Likely, this mechanism is a part of the next lower level of perception in our equation system. The key point of this next level of perception is how the computed speed of particle which is moving at greater than the speed of light can invoke the physical world as we understand it.

In figure three, the magnetic component of the sub-unit's helix type movements is a result of depth contraction or flattening of the sub-units's quark product as the quark approaches light speed. This occurrence is not a property of the particle itself, but instead is a result of the effect of light-speed on the quark particle. The idea the cause of magnetic forces is related to angular or linear velocity seems logical because speed induced movement in phasing of

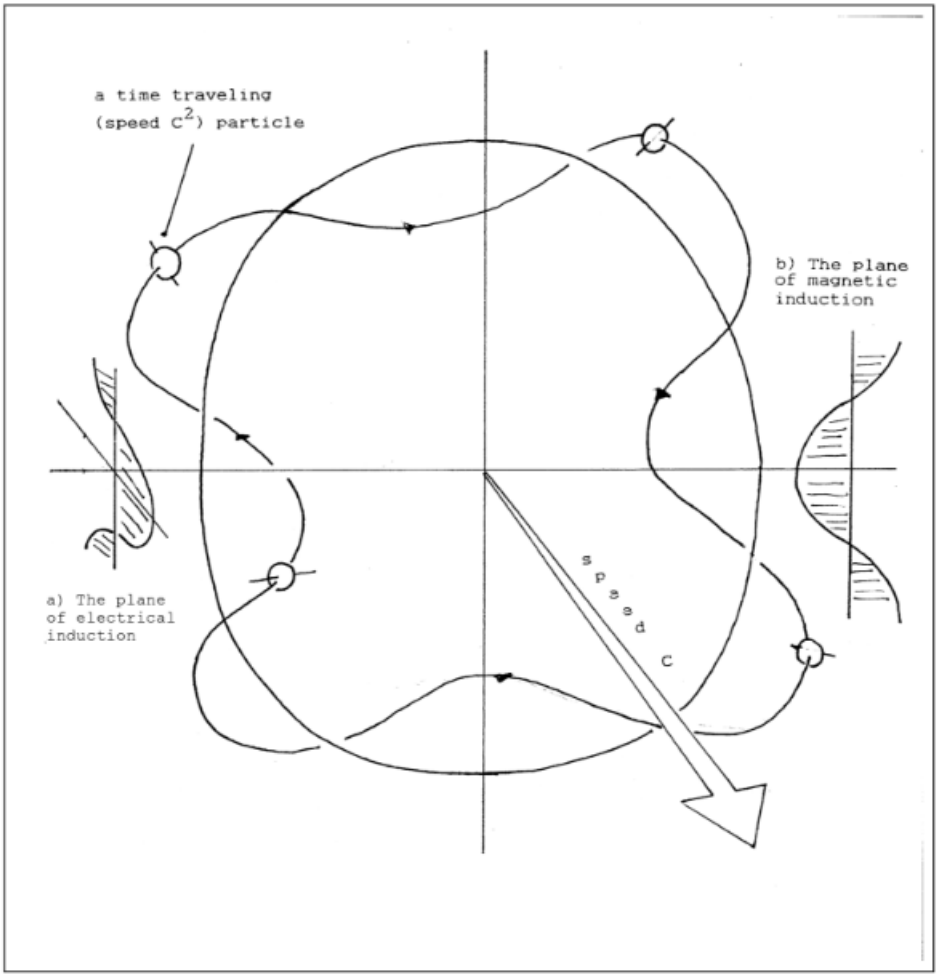

Figure 4.3: The Fundamental Force's Electromagnetic System

A subunit particle, possible a neutrino propagates at light-speed, thereby flattening its tumbling path. This path sets up the phase units of the quark.

the internal magnetic grid will not only cause mass increase, but, alternatively, magnetic field induction. The subtleties of this occurrence can be examined mathematically by studying the vectors and speed of the sub-unit along their helix path while simultaneously considering the phasing influence of spatial displacement.

The concept of phasing takes place within context of the mechanical influences of spin. Spin itself may be defined as being the requirement of an essentially two dimensional planar phenomena to gain stability within the three dimensions of physical movement. The motive force of spin may be seen either as helical vector resolution or as the repulsion of the magnetic-voltaic fields generated by the sub-unit from other aspects of itself. This force causes a tumbling of the particle-wave system, so that the isotopic spin $\frac{1}{2}$ quark system is achieved. The study of the non-spinning charmed quark indicates this factor is negated as the quark particle suffers speed induced phase problems.

The visual nature of one-half spin is perhaps not well understood by the reader. According to the author's understanding, it is the product of a situation where there exists alternating axes of spin. These axes are the centers of counterbalance of the tumbling internal forces. They are "wobbly", for lack of a better word. A diagram helps to explain spatially the concept of $\frac{1}{2}$ phased spin as it relates to quarks. **Fig. 4**

Spin characteristics play an important role in the switch from classical mechanics to quantum mechanics in scientific study. Specifically, the resolution of centripetal acceleration forces in particle physics is accomplished by the spin characteristics of the angularly moving particles. The particle's energetic system, when experiencing angular momentum, experiences spin to the extent the spin balances the efforts of the centripetal force to remove the particle from its orbit. This occurs in a mathematically precise way.

The analysis of spin mechanics gives us a renewed insight into the vector patterns of the sub-units as they are experiencing angular momentum in the quark system. They must have an internal spin component which keeps them operating in the system. Therefore, their internal structure must have an mechanical nature.

It follows there are different types of subunits. This variance may play a key role in the establishment of the three "families" of baryons. Each subunit "neutrino" in a family may have affinities for a particular quark's energy system. In other words, a quark's subunit exhibits an internal static charge and magnetic polarity

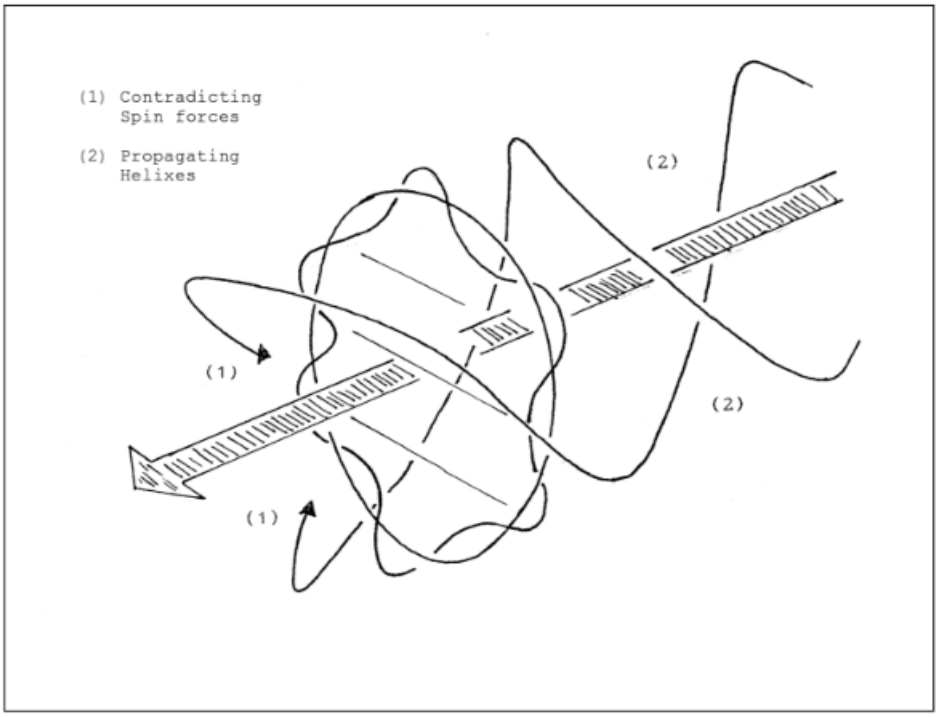

Figure 4.4: Spin Characteristics of Quarks

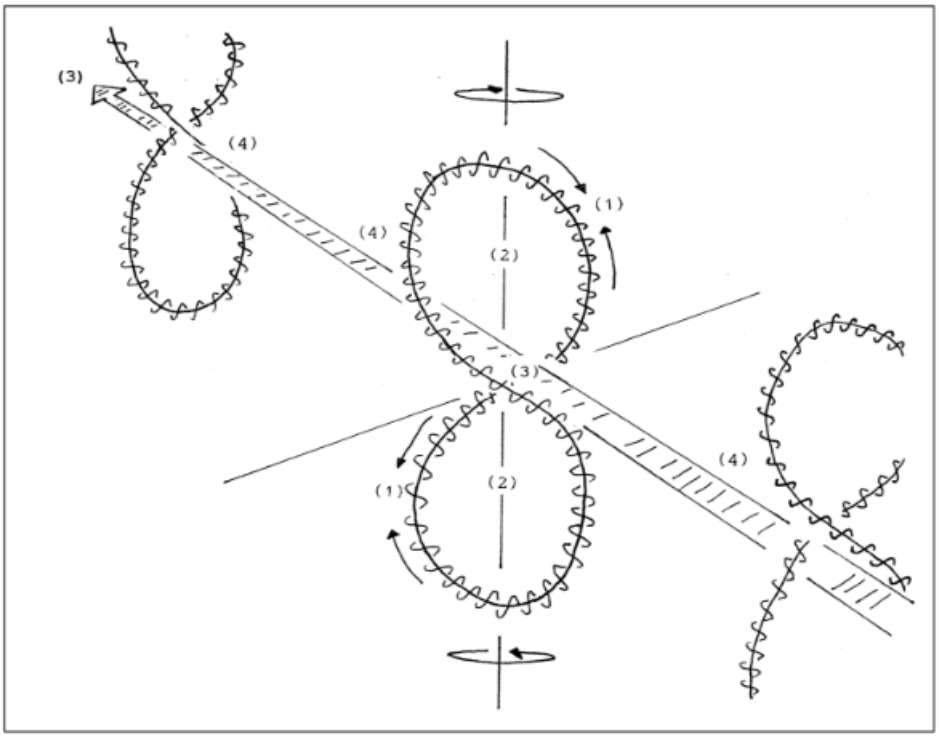

Figure 4.5: The Elastic Tensors of a "Neutrino" Subunit

(1) Infinite Wavelength Compression
(2) Infinite Charge Compression
(3) The Propagating Line
(4) Modular Alignment Along The Line Of Propagation

which is opposite to the quark's enticement, and which enters the quark into a reacted state. This reacted state corresponds to our interpretations of what charge and mass means. A visual look at the generic subunit, and its central role in the analogy of mechanical "layers"is shown in the following diagram. The logic which formed quark theory is applied inward to help solve the problems incipient in understanding neutrino structure. **Fig. 5**

In the particle systems we are studying, frequency changes occur in accordance with the velocities of the particles. This is related to the elastic tensors, and as such, is especially seeable in the behavior of electrons. Their velocities, mass and wavelengths are aligned under guidance of Plank's constant. To understand the mechanics of this interaction, one must firstly realize how the forces of general relativity play on the electromagnetic phasing: As phasing attempts to increase to forty-five degrees, the mass also

increases. The force the resulting mass increase has on the number of spin speeds, hence frequencies, is to decrease it. This decreases the wavelengths of the magnetic portions of the radiations. Plank's constant appears to represent a wavelength decrease in a system like the quark where there is two fold helix type action. The action cannot remain intact unless a complete wavelength or spin packet of energy is removed.

The relationship between wavelength contraction and quark behavior should be examined. The quark is likely subject to this limitation, with the result being that the helix rates of the quark's subunits are compressed as the quark gains linear momentum. This rate of compression becomes astronomical as the quark unit achieves light speed, and this may be part of the reason why quarks can escape particle detection. The subunits's role in this physical setup is found in how the helix movement component of its energy mass has reached and surpassed the light speed point, and hence both the neutrino's wavelength and its mass have become practically undetectable. Note how the infinite helical compression caused mass dispersal beyond the speed or light.

The pattern of spin frequency change exists in one form or another in all particles trying to obtain light speed, and so, to help express the mechanics, a diagram is needed. Note therein the electron has angular momentum which does prejudice the structure to the frequency of its movement. The net result of this is the wavelength variations of the electron or similar particles are not infinite; but instead are finite under under Plank's constant. **Fig. 6**

To review, the lack of understanding of the wavelength and velocity characteristics of quarks is perhaps the main reason why they are not viewed as mechanical entities. The subunit's incorporation in the quark's structure may contribute to this.

4.3 Quark to Quark Interaction

If one used classical mechanics to explain quark to quark interactions, one would say these interactions are magnetic, electric, and inertia based interactions, and then analyze from this point. In contrast, the predominate concept in quantum mechanics, as far as quark to quark interactions are concerned, is "color". This abstraction was formed to satisfy the requirements of Pauli's exclusion principles: Color theory states each quark of a particular flavor, e.g., up, down or charmed, must have incorporated in it

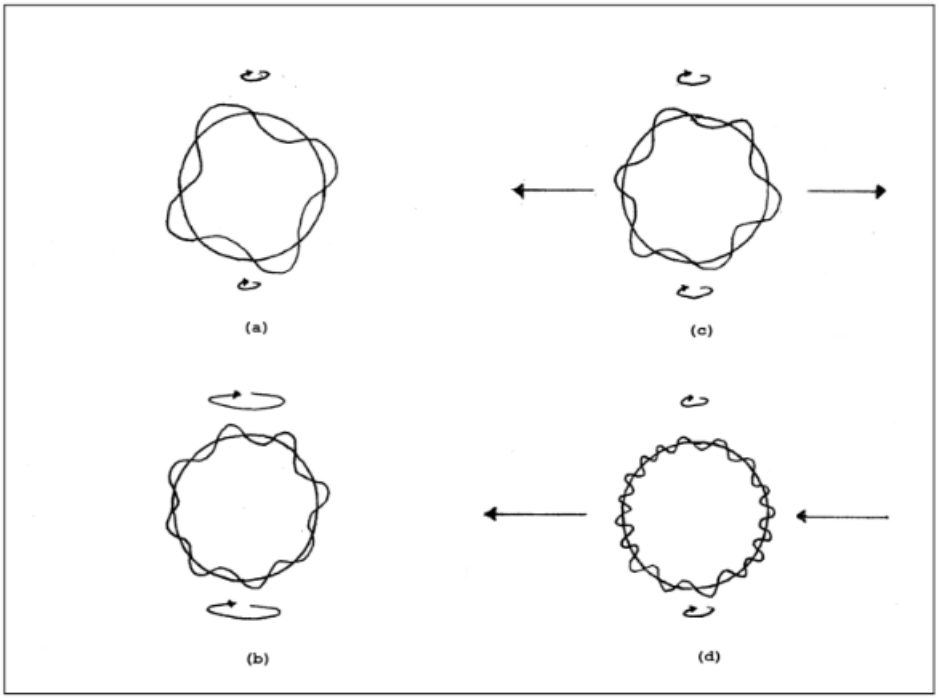

Figure 4.6: Frequency Changes as a Rotational and Linear Velocities

(a) Low frequencies occur due to small angular moments (spin speeds).
(b) Increasing angular momentum (spin) increases frequency.
(c) With no secondary linear speed, a certain wavelength is maintained in homeostasis.
(d) Like increasing spin, linear momentum increases frequency from the homeostasis point.

properties which allow it to inhabit the same quantum numbers. In classification, color properties have been found to be of three types red, blue, and green. The concept of color is a categorical method: The underlying mechanism is not known.

The way to solve this problem from a mechanical point of view is to reassess the theory of quarks developed here in order to incorporate this empirical data. The previous theory of quarks concerned itself only with the phasing of magnetic fields in the quark's geometry. It did not concern itself with the polarity of the phasing of the quark geometry. Therein lies the solution. The polarities which are available to elicit each quarkian effect are North, South and Intermediate. The intermediate vector is an propagating bar field, and is this sub-topic's equivalent of the forty-five magnetic phasing expressed in the last section. Its mechanics are different, however, when considered as part of a bonding mechanism. For example, each singular color assigned to each quark is founded on the singular, circular movement of the quark's subcomponents. This causes an singular magnetic polarity, e.g., a singular color, to appear on the outside of the quark. The difficulties in understanding this process are those of understanding the differences between circulation and propagation. Perhaps the best way to explain this is to construct a visual aid, and so the following diagram is presented. **Fig. 7**

The flavors and colors of quarks, along with their neutrino subunits, interact together to form the various baryons. We are primarily concerned with the formation of neutrons and protons here since other baryons such as muons are not critically important for the growth of elements. Furthermore, the structure of these other baryons may be deduced from the subsequent discussions.

The circulation component of quarks (coloring) allows for a mechanical situation where quarks may bind together in triangular symmetry. This occurs through the sharing of magnetic affinities. The north circulation quark may bind with a south circulating quark to gain a double configuration, and again with an intermediate propagating quark to gain a triple configuration. Therein, the magnetic patterns are both cohesive and complimentary. **Fig. 8**

The interrelation of color in building three-quark structures has an important influence on the phasing relationships between quarks: Whereas in the internal circulation of quarks, we had a mechanism where the polarity of the propagation was of one type, e.g., north, south or intermediate, in the phasing relationships be-

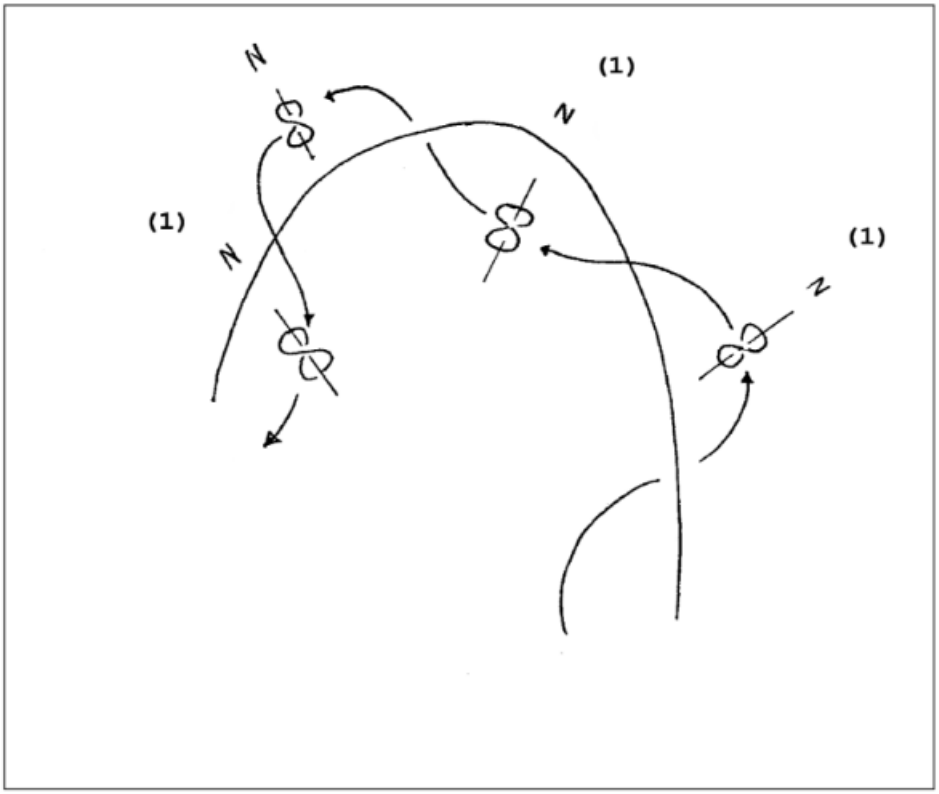

Figure 4.7: The Magnetic Basis of Color Theory in a Quark

(1) As the subunit particle moves, the axial orientation, e.g., the polarity, remains constant on the exterior of the structure.

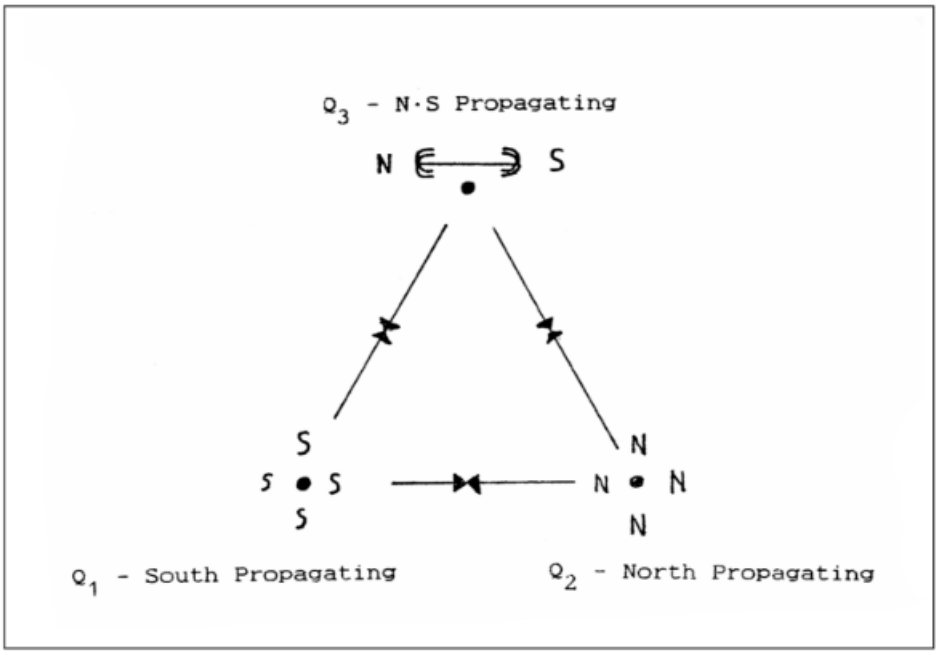

Figure 4.8: The Theoretical Basis of Color Interaction

tween quarks the polarity of the propagation is, because of flavor, of two different types. The effect this has on the energetics of the quark interaction is to cause the formation of photon-like imaginary particles in the associative mechanism. As close as can be approximated from present verbiage in use in quantum physics, these particles are called gluons. Their existence is a property of the proper polarization between the quarks. They are equatable with the strong nuclear force. The weak interaction may be seen as the forces caused by an improper polarization between the quarks. In either case, they have attendant charge and magnetic properties.

The polarity of gluon areas, when these areas are in a reacted state, is affected by the phasing relationships which occur between the quarks as they form into nucleons. To understand this, we should recall how the difference between the "desiring charge" state and the "received charge" state of a phasing system is a question of the receipt of a suitable quanta of energy. The suitability of the energy is determined by the inter-quark phasing system in the sense the association will generate the prerequisites of charge. The basis of this generation is found in the repulsions and attractions of the quark's static charges as they associate. When two like charges

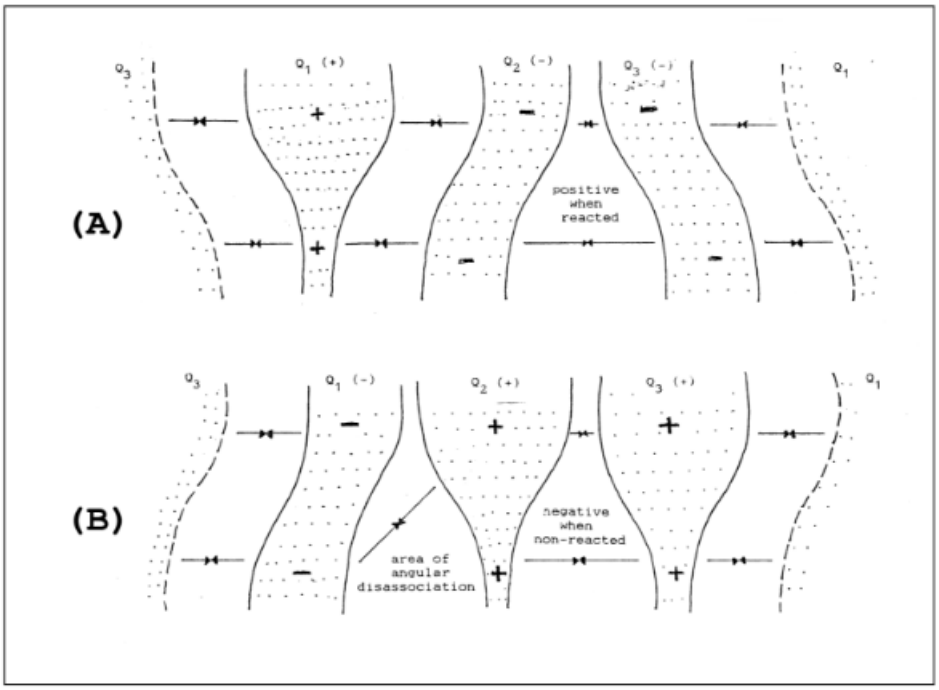

Figure 4.9: Fundamental Aspects of Nucleon Formation

(A) The phasing relationships of quark interaction during neutron formation.
(B) The phasing relationships of quark interaction during proton formation.

are associating, their electrostatic components are repulsing, and hence they form a ninety degree out of phase relationship. The "reactivity" of the resulting charge state is dependent on the polarity of the charges which are associating. When positive charges are in play in the associative mechanism, the out-phasing is reacted by the charges themselves. When negative charges are associating, the phasing system must be reacted, if maximum cohesiveness is to be obtained. By contrast, the association of charges which are attracting will lead to zero degree phasing, as the particles approach each other. The resulting inter-quark area obtains a neutral stance because neither the reacted/unreacted states, nor the positive/negative charges are acceptable in its four force domicile. The result is the forces are truly gluonic in this area. **Fig. 9**

In studying nucleons, spin takes a fundamental role. One will recall up and down quarks are spin $\frac{1}{2}$ structures whereas neutrons and protons are spin 1 structures. What occurs to allow the change

in spin designation of the bound particle? What are the magnetic affinities of the resulting particles? To answer these questions one must go back to our definition of the spin $\frac{1}{2}$ force. Recall how we showed an up or down quark is a two dimensional entity seeking a third dimensional identity. To do so, it had to revolve on an indeterminate axis. This situation aids nucleon formation, largely because the phasing requirements of quark to quark interaction requires a particle which may spin indeterminately in either direction. When the quark is incorporated in the nucleon according to the phasing, one side of the spin becomes dominate. In doing so, the energetics of the spin are transferred to the nucleon structure. This occurs in such a way that it will not destabilize the particle. Hence, one part of each particle's spin energy remains in angular momentum, while the other side of the spin energy is transferred into linear momentum. Each quark's magnetics, by this factor, achieves a bilateral role in becoming angular and linear motive power.

The transfer of quark energy into motive power results in the exposure of the nuclear core to new types of magnetic patterns. These patterns may be called "nuclear magnetic affinities". The next chapter explores how these affinities influence and are influenced by the various static charges in the nucleon. It also examines the properties which are necessary for the creation of elemental forms.

4.4 Formed Neutron-Proton Structures

In studying the mechanics of formed nucleons and their substructures, we are simultaneously pressed into two corners. One corner is the requirement of studying static electrical charge, and the other is the requirement of studying electromagnetic patterns. This dichotomy becomes tantamount in considering formed nucleon structures.

First to be considered is the magnetic field of the moving nucleon. We previously noted how this field is based on the dimensional shift which occurs as velocity increases. The limiting factor on this we saw as being the mass increase. This process, when in linear movement, causes a polar field to occur. In angular spin movement, the process is the same, with each quark in the system being the cause of a magnetic field based on the axis of the rotational movement. The nature of the induced magnetic field is itself divisive to certain static charges which occupy the nucleon's core,

and as such, it somehow alters the state of the core. Diagram ten is provided here to clarify the interconnection between momentum and electromagnetic field polarity. **Fig. 10**

At this point, there appears a need for clarification between the magnetic field of momenting spin one and one-half particles, the frequency components of the momenting particles, and the polar gaussian fields of these particles. According to the author's understanding, the spinning gaussian components determine the frequency and intensity of the magnetic field projections. Spin rates align with frequency rates. These forces can be sufficient in strength to be considered separate phenomena in the following discussion. Moreover, the spin one particles of this section of this paper have a predilection for the spinning gaussian state. With spin one-half particles the opposite is true. The reason for this is the particle does not have a steady axis. Hence the electrical and magnetic charges of the spin one-half nucleon's interfere and shield the polar magnetic properties.

In terms of electrostatics, the neutron and proton are subject to equilibriums. This causes deformations of the three quark geometry to occur. In the proton, the forces of deformation are initially large as the two positive charged quarks are forced from one another. Meanwhile, the proton's two up-down interconnections tend to lessen the negative charge. This occurs because the charge inducing quadrants of the quark's internal structure are divided from one another. In pulling apart the negative quark, the other two quarks lose part of their charge. This fundamentally affects the machinations of the particle.

In the neutron, the forces of deformation between the two negative quarks are not as large as what exists between the proton's two positive quarks. This variance affects the subsequent interaction which occurs between the neutron's two up-down interconnections and the internal structure of all three quarks are neutralized. No electric dipole can occur on this structure when it is considered in this static manner.

When considered dynamically, certain conditions control the degree of distortion and the charge topography of the nucleons. The magnetic field is the basis of this control. As it increases due to angular momentum, it disperses the quarks unequally in the operating system, thereby altering the communicative properties of the quark's charge. Moreover, it also causes certain events exterior to the nucleon, and these events are fundamental for understand-

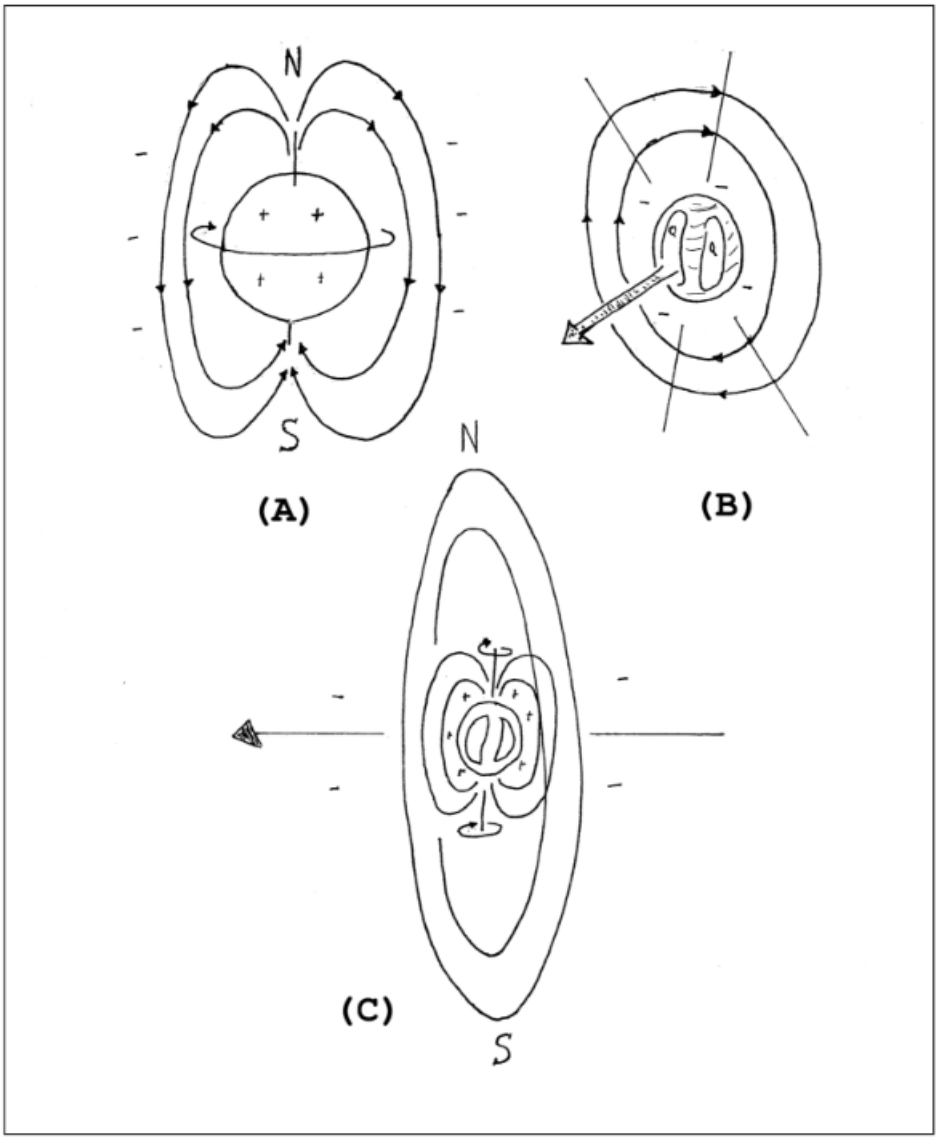

Figure 4.10: Magnetic and Charge Relationships of Moving Particles

(a) Angular momentum's Gaussian Fields (b) The Linear Field Propagation Of An Moving Particle (c) A Combined Gaussian Magnetic Field System

ing the electrodynamic nature of the surrounding electron orbital fields. As shown in the previous diagram (fig 4.10), the magnetic fields are projected outwards in increasing widths as the moments of the nucleon are increased. This increase in rotational speed affects the polarity and distances of the electron orbital patterns from the nucleon structure. The diploid nature of the fields is the basis of this mechanism. In the central diploidic area, a positive charge is apt to exist. In the unipolar projections of the magnetic fields, a negative charge is apt to exist. In the absence of these charges, existence of an area which desires to contain these charges exist. In the case of the neutron, the effect this magnetic field has on the charge deformation in the nucleon is to reactivate the positive charged quarks while causing the negative quark to lose its reacted state, e,g., to cause a situation which is conducive to electron and neutrino emission in the ultimate case. The ultimate case in not dominate however, because the angular momentum's field induction strength is not conducive for it. In the proton, the induced diploid magnetic field affirms the two positive quarks, while being essentially depletory to the negative quarks.

The effects of linear movement on the charge rearrangement of the nucleon is different from the effect of angular momentum in the sense the magnetic field is planar and not circular. This affects the rotational ability of the particle, with the effect being negative charges wish to be exhumed from the particle. This occurs because of the bilateral contradiction which exists between the vectors of rotation and the vectors of linear movement. Specifically, the linear field seeks to expel positive forces as it grows, while the angular field wishes to expel the negative forces. When the movement of spin on the negative quarks cause a situation where the negative charge is moving at ninety degrees to the planar magnetic field, torsional forces are greatest and decay occurs. This situation is made worse when the internal constituents of spin accentuate negativity on the particle's surface. Predominately, this occurs on the neutron. **Fig. 11**

The basis of understanding of the mechanics of proton to proton, proton to neutron, and neutron to neutron interactions is to take the variables of the last few paragraphs, and to set them to the reality of the situation. For the sake of further discussion, the nucleons will be considered to be angularly rotating at medium speed. Linear movements will be disregarded. Our task then is to decipher the mechanical properties of the nucleons at this speed,

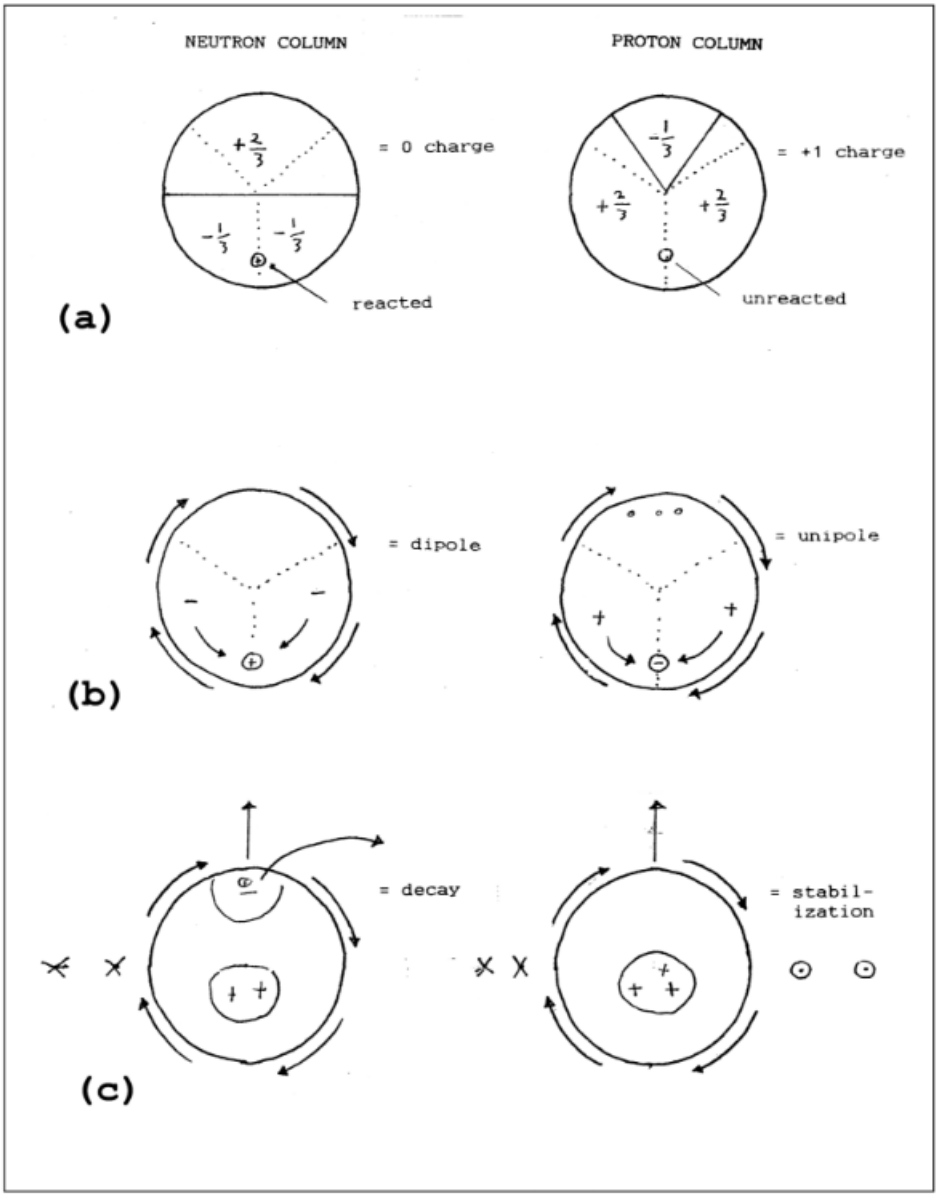

Figure 4.11: Quark Changes due to Charge Induction Relationships

(a) Resting topographic states of the nucleon show partial or completed charge neutralization.
(b) Angular momentum induces alteration of the charge dispersion.
(c) Combined linear and angular changes to the nucleon's core.

and to thereby expose the nature of the interactions. Helping us in this task is the knowledge which was gained in the previous chapter (The Organization Of Nucleons in Atoms). Therein, the mechanical requirements of the nucleons were set forth according to what was necessary to build elemental structures. Let us review this knowledge while consolidating it with what this chapter has shown.

First to be considered is the proton. We have already seen how its charge centers are affected by the quark's association with one another. The positive areas are depleted somewhat and the negative quark is separated into a no-charge area. This activity is reinforced by the magnetic field induction of angular momentum. Corresponding to this are the statements of proton mechanics in the previous chapter. Therein, the proton was shown to have an unequal distributed positive charge which tended to concentrate on one side of the revolving structure. This concentration of positive charge corresponds with the phasing requirements of the gluon forces in that area. It is the central area upon which the angular momentum's magnetic fields must act. The previous chapter also showed how the other side of the proton had a neutral charge, and this corresponds with the neutralized negative quark which occurs in that area.

The shifts in phasing which occurs during the quark's interaction with one another in protons helps predict the line to line bonding of protons in elemental structures. Specifically, the angular disassociation connected with the one unharmonious negative quark to positive quark's gluon bond is easily resolved by the cohesion of more protons.

In the neutron, the mechanics are different from the proton. Its charges are eliminated when considered statically. However, when the angular momentum's magnetic fields are induced on it, the situation is different. The negative areas, including negative type gluons, have a tendency to remove themselves from the core area. This area of removal is initially restricted by the charge deformation in the area. However, the diploid nature of the magnetic field reactivates both the positive and the negative charge areas, with the positive charge area being made more expansive. This contrasts with the previous discussion on protons in the sense the proton's magnetic forces sought to compress the positive charge. However, because different dispersions of gluon forces exist in the two types of nucleons, it can explain the differences between the

magnetic field effects on neutron and protons. The proton had an un-reacted positive charge between its two positive quarks, whereas the neutron had a reacted positive charge between its two negative quarks. To react, the proton's positive quarks connective area had to move positive charge into it, thereby concentrating the positive charge. This occurs as the angular momentum's magnetic field is induced on the structure. By contrast, because the neutron's negative quark's connective area is reacted (by a subunit), it had to move towards the negative quark in order to respond to induction. This created a static dipole in the neutron.

The net result of the last paragraph is we gain a neutron mechanism which is similar to the one found in chapter two. This chapter showed a structure with an area of positivity and an area of negativity. The distinction geographically between these two charges was seen to be a factor of angular momentum. It was also shown the neutron is a static particle; it has to be supplied with magnetic coordination by the proton if it was to form line bond structures. This concept correlates perfectly with the phasing structure of the gluons in the neutron, e.g., with the "angular disassociation" occurring during the quark interaction. However, this does not mean they cannot be made to form line bonds, as their dipole charge structure can find a pairing position when the charges between neutrons are offset one-hundred and eighty degrees along the spin axis. As stated before, the motive force for this pairing comes from the static charges of the protons, when the proton's axis is located at ninety degrees to the neutron's axis. The binding of neutrons to protons at angle integers of less or more then ninety degrees is improbable because of the lack of "angular disassociation" in the neutron.

With the exposure of the methods of nucleon interaction, the next task is to see what kind of structures can be formed. The reader should consult chapter two, The Organization Of Nucleons in Atoms, to assess how neutron and proton interaction results in the formation of the various elements.

4.5 Fusion Reactors

I would like to present a series of diagrams where I consider the design of a fusion reactor. This reactor design seems feasible on the surface. In retrospect, the most likely issue in this design is one of scale. How big does the reactor have to be to add vector

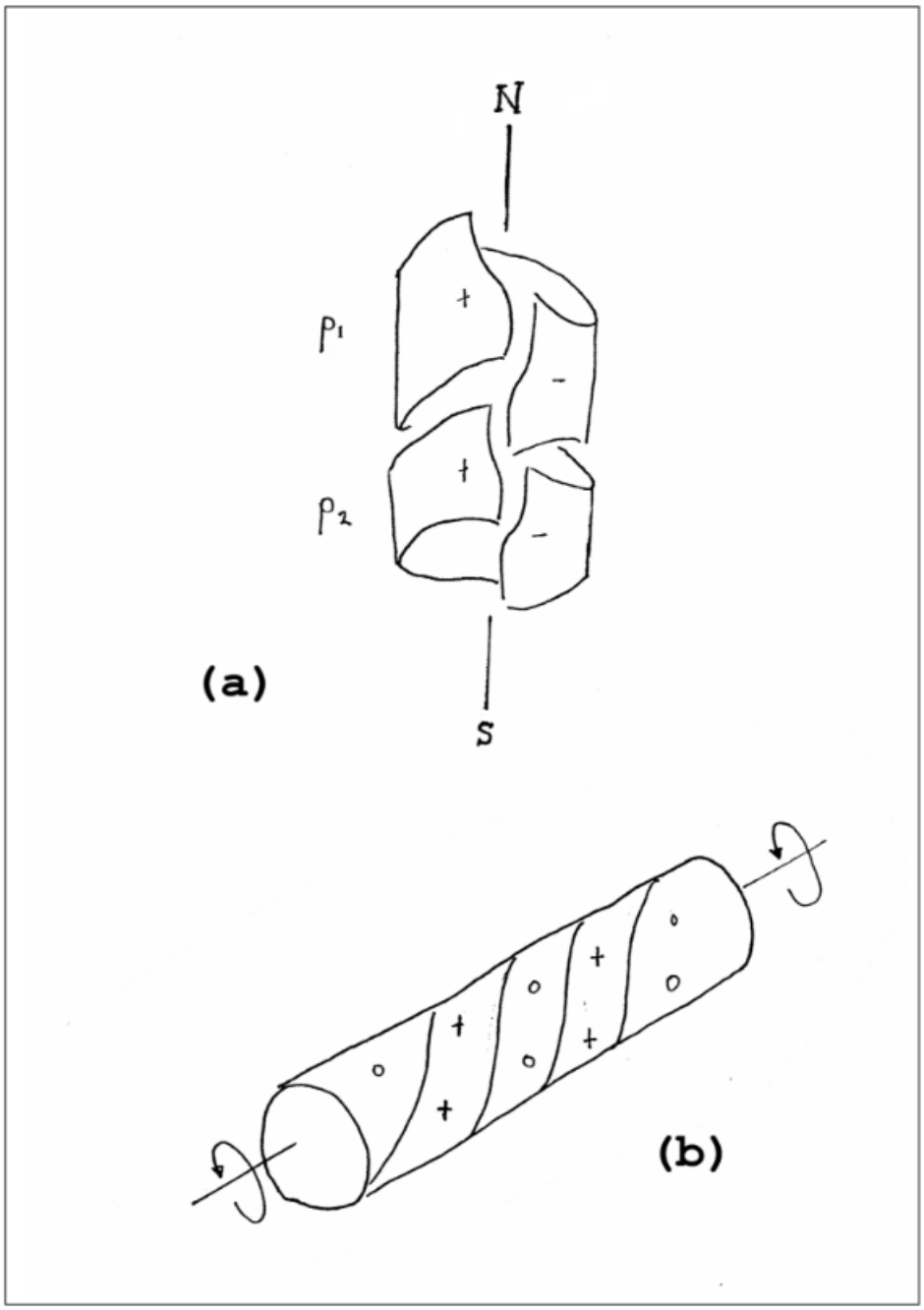

Figure 4.12: Nucleon Line Bonding

(a) Angular disassociation leads to pairing in protons. (b) The charge equilibrium of the resulting structure results in a "barber-pole" or "worm gear" mechanism.

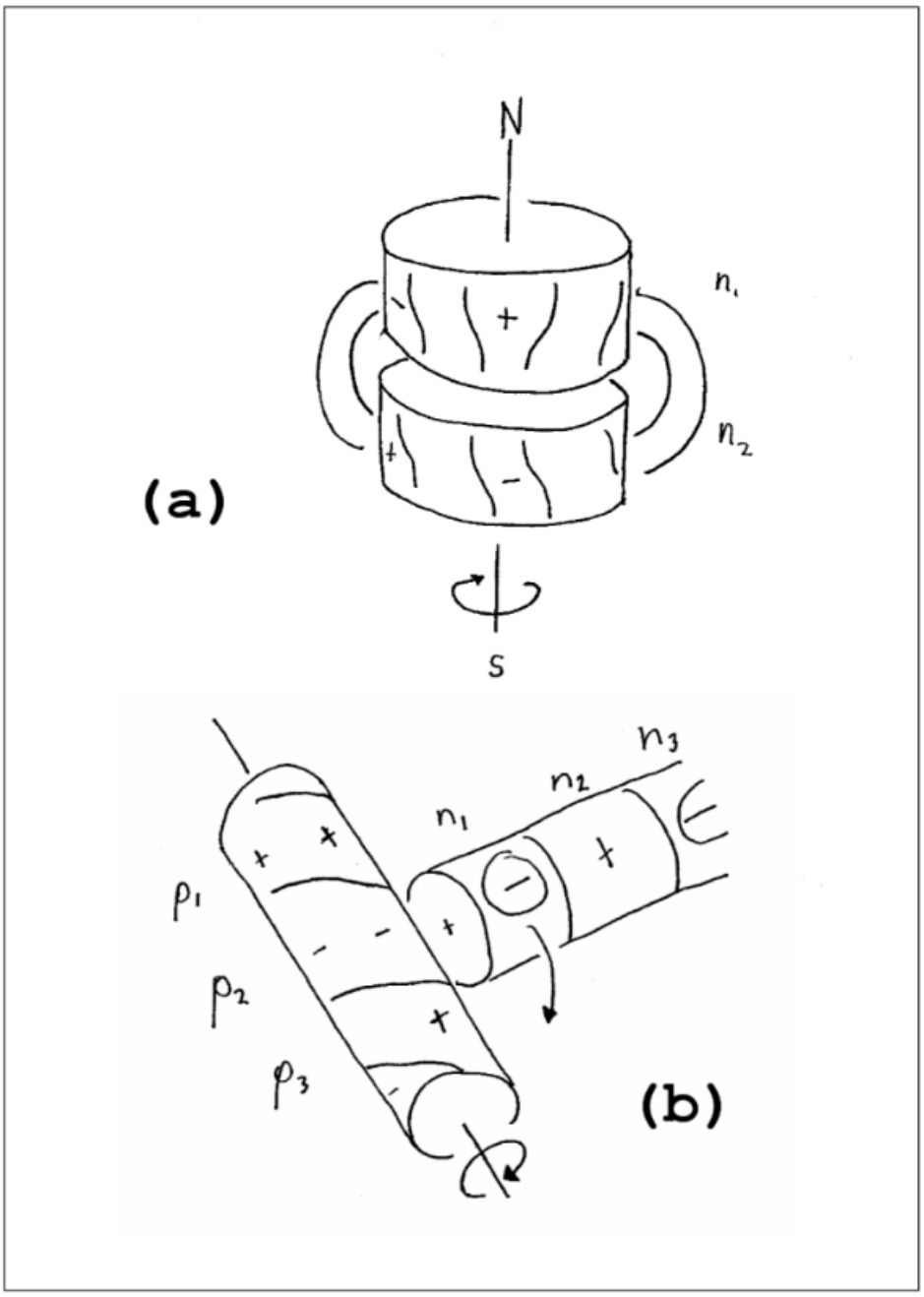

Figure 4.13: Nucleon Line Bonding

(a) The electrostatic cohesion of neutron line-bonds allow the formation of "cog tooth" mechanism. (b) A pulse type "torque converter" mechanism is formed during proton line-bond to neutron line-bond association.

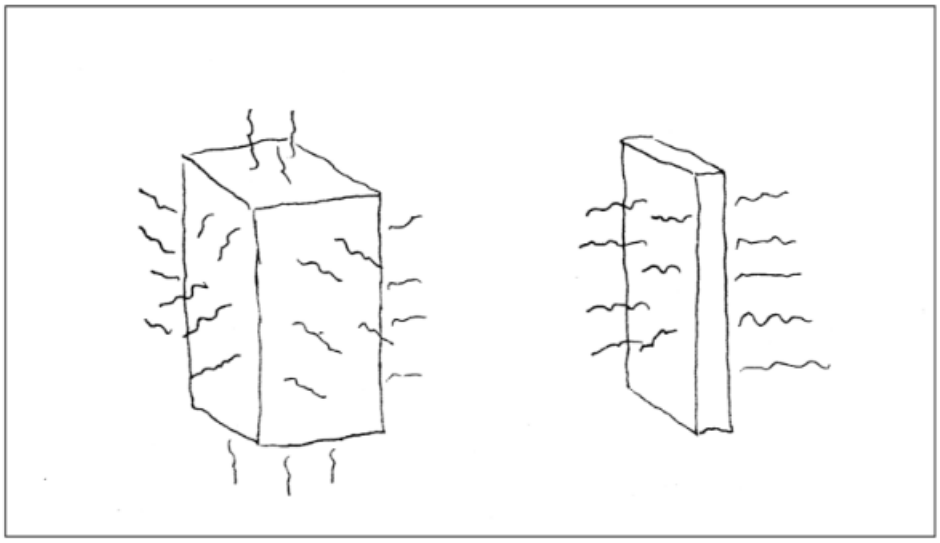

Figure 4.14: Radioactive Decay As a Function of Physical Dimension

As the shape of the radioactive matter is made narrower, the direction of the radiation becomes more specific.

control to nuclear decay?

The diagrams begin with a study of how shaping of radioactive material affects the directions in which radioactive decay is emitted. From there, we look at what forces would be required to further control the direction of the decay. Following this, a study of a machine apparatus which could mimic the forces required is examined. Then, the resulting machine function is expanded on so as to allow for the creation of a fusion type reactor. Various core details are examined as various types of fusion reactions are explored.

The idea of adding electrical direction to diploidic fields is key in this design. It is interesting to note this pattern of adding direction to electron movement exists in diverse areas such as enzyme energetics and asymmetric organ differentiation.

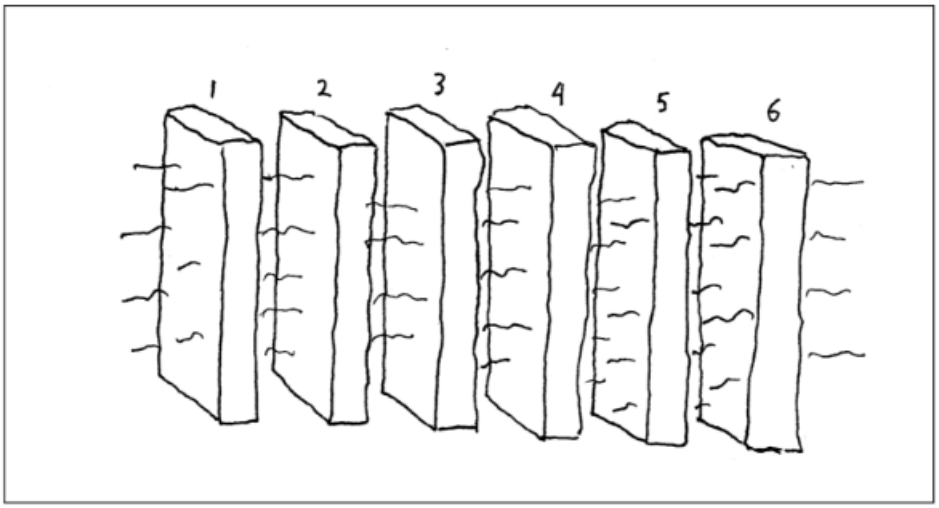

Figure 4.15: The Segmentation of Critical Mass

In typical reactor and bomb design, critical mass is separated into segments and the separation is modulated by various means.

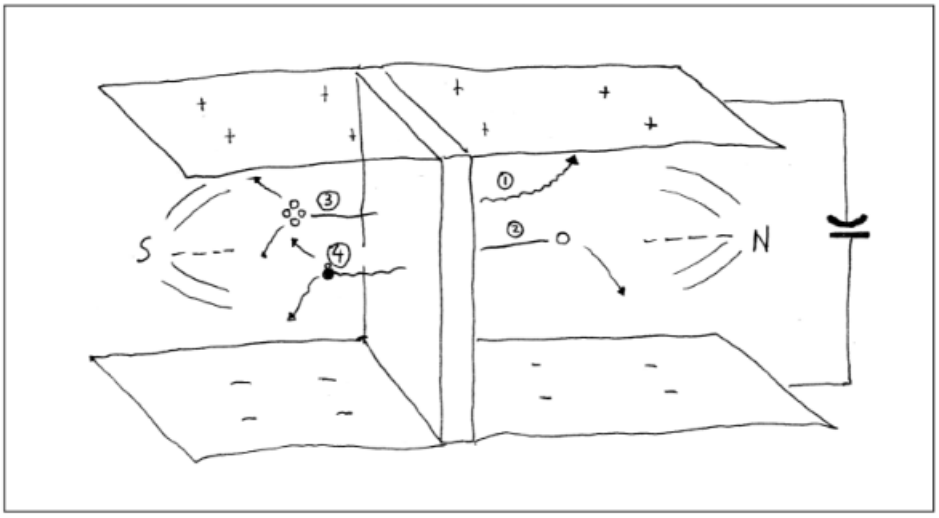

Figure 4.16: Secondary Control in Radioactive Decay

(1) shows beta radiation being attracted toward the positive plate. (2) shows proton emission being attracted towards the negative plate. In (3), heavier nuclei, like the helium nuclei, are axially stabilized, and is thereby subject to subdivision should sufficient collision force be applied by nuclei form other segments . In (4), the neutron also has axial stabilization and is also subject to the same subdividing forces as (3).

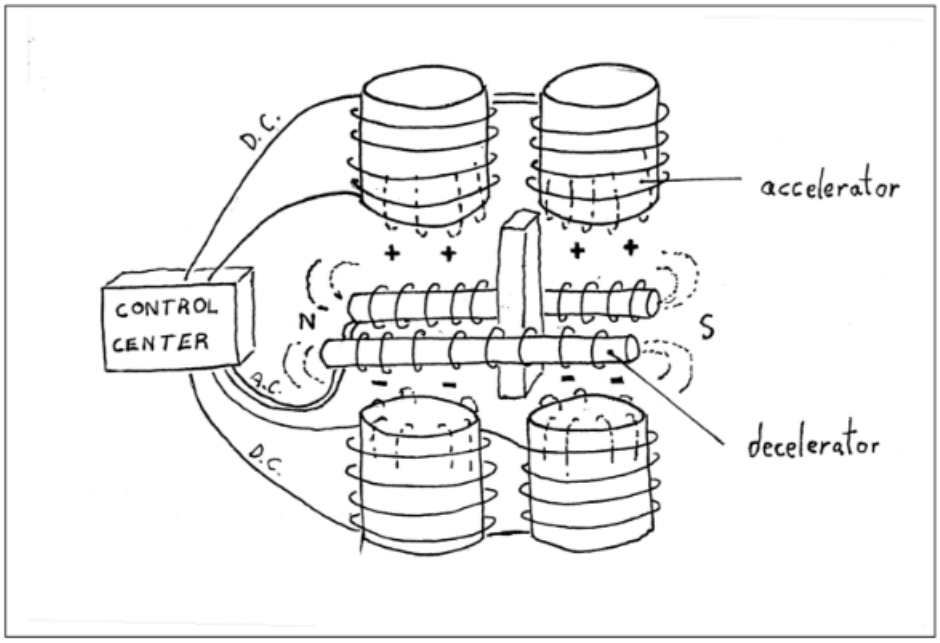

Figure 4.17: Radioactivity as a Function of Magnetic Stress

Capacitive effects and magnetic effects are related in so far as the both can be effectively mimicked through wiring techniques. The initial dipole of the large electromagnets set up an environment where charged particles want to be evacuated. The longitudinal electromagnets then add direction to this decay.

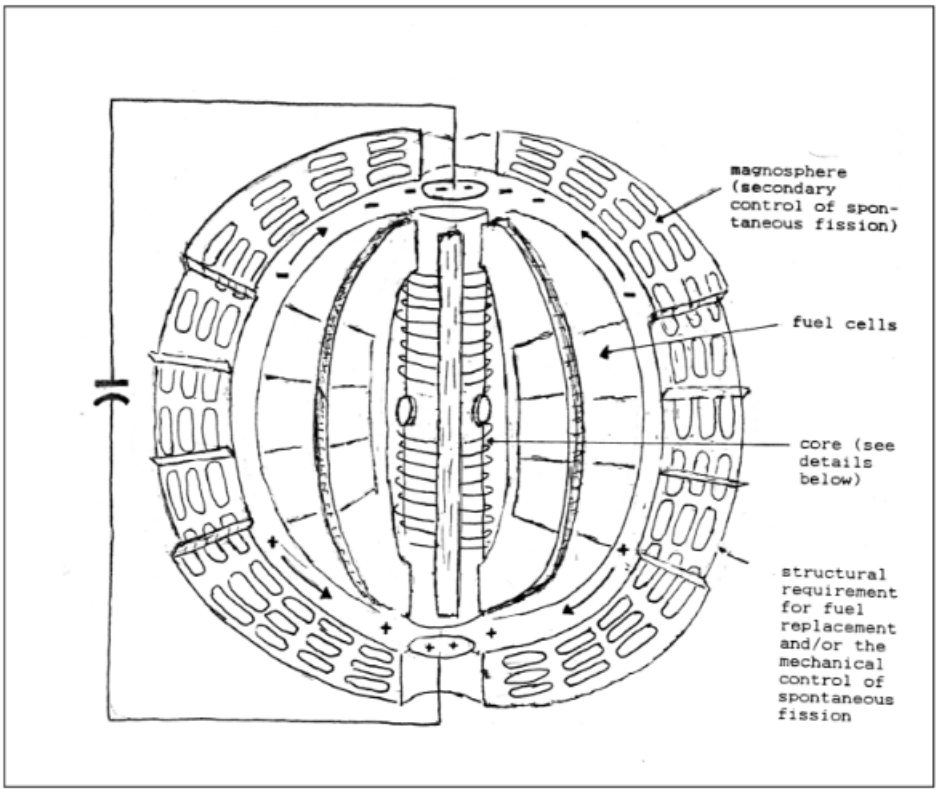

Figure 4.18: A Direct Converter Fusion Reactor

Refining the mechanical precepts into a fusion reactor requires the direction of the energy into the core in a controlled manner. By making the fuel segments surround the core and by refining the magnetic control, a fusion reactor design becomes apparent. The fission reaction is modulated by moving the fuel material closer or further from the core. At each end of the sphere, an avalanche area exist, where fusion would occur. One option to this design is to straighten out the fission reactor area and to direct the separating energy into an exterior avalanche area.

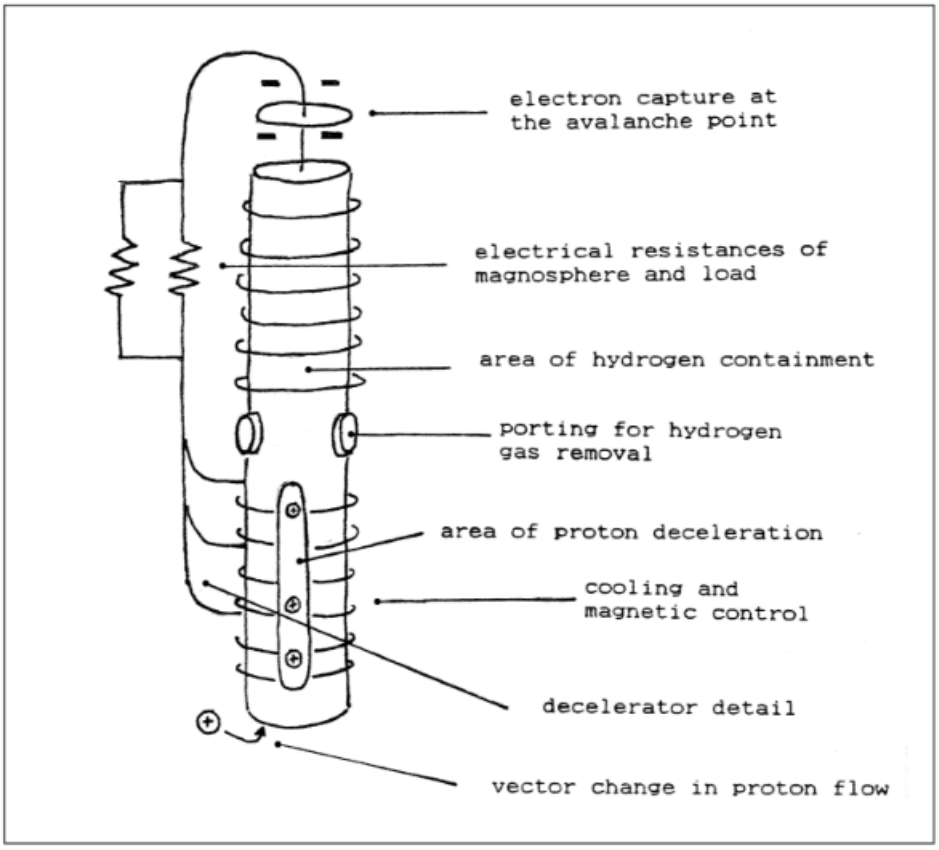

Figure 4.19: Core Details: Electrical Energy and Hydrogen Gas Production

The core can be configured in many ways. Here the design is for electrical and hydrogen production. The need here would be to rob electrical energy from the avalanche area, so as to lessen the intensity of the fusion reaction.

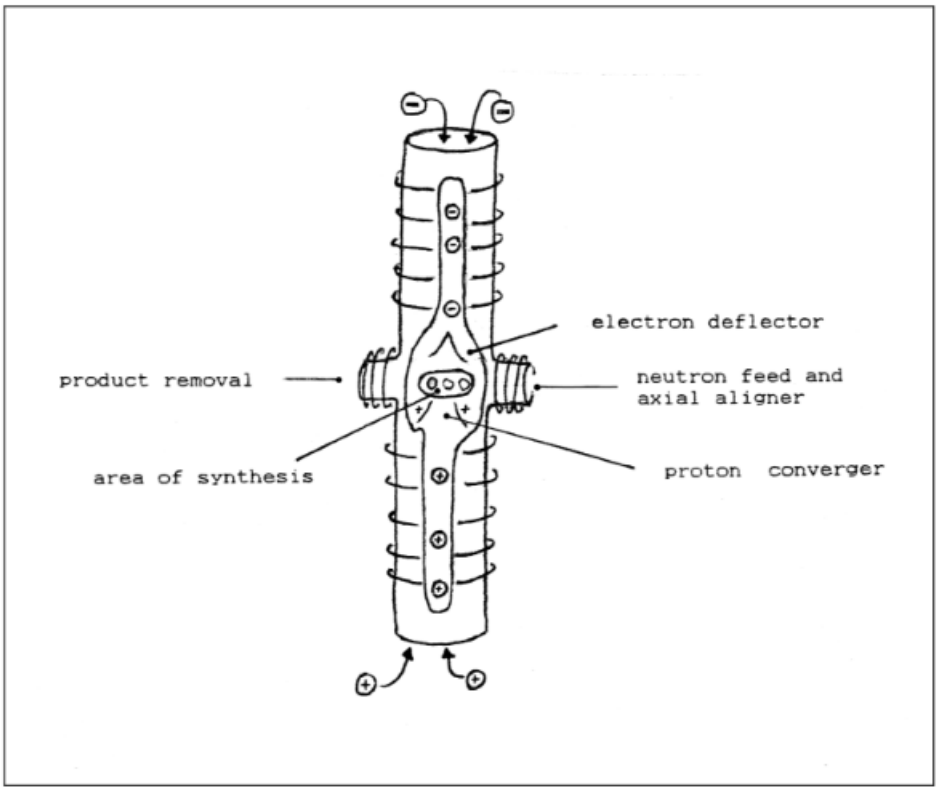

Figure 4.20: Modifications for Alchemical Experiments

This core is meant to build line bonds through the feeding of neutrons from the axial ring into converging protons. Energy robbing at the avalanche area would help this process as would the introduction of magnetic field line into the coalescing matter.

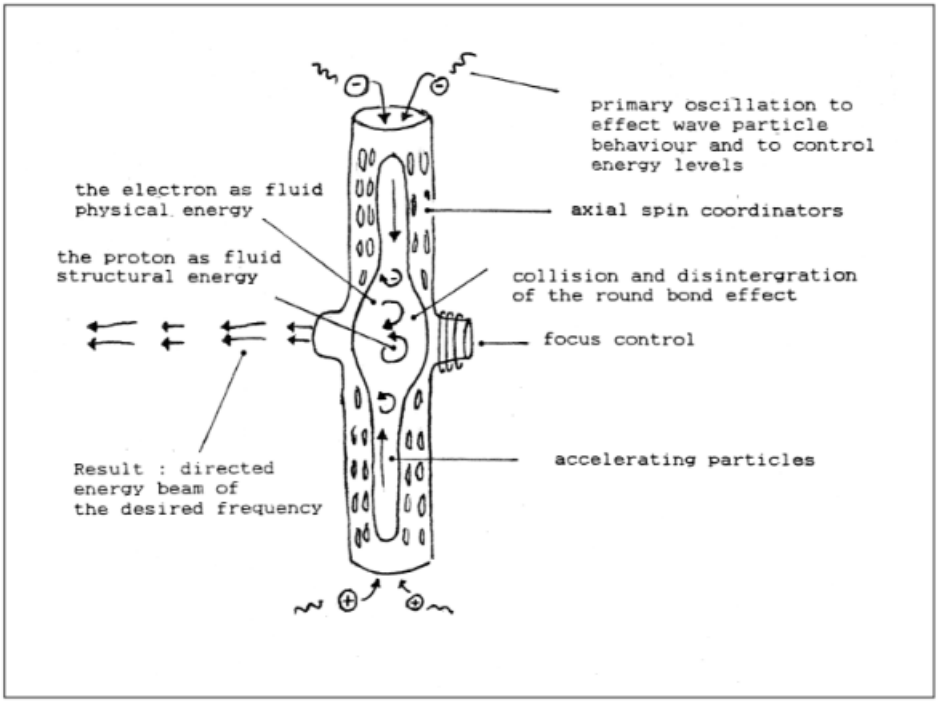

Figure 4.21: Mechanical Aspect of Directed Energy Systems

Using nuclear reactions for directed energy has various military, space exploration, and drilling applications.

Notes

Chapter 5

A Machine Theory of DNA

DNA is, by most observations, a sequence of bases which encodes for protein structures. This paper shows the DNA structure is more complex than this; it shows how the DNA molecule acts as an electro-mechanical machine to allow a diversity of biological behaviors to occur.

The analysis begins by examining electro-mechanical aspects of the DNA "slice", and thereby explains the existence of a DNA "engine" based on movement of electrons inward from the edge of the electro-phobic acid, and up and into the sugar rings of the acid. Electrophilic attraction by the bases initiates this process and the existence of magnetic continuity through the p-orbitals of the sugar rings allows it to occur. Subsequent to this, this paper examines the peculiarities of electrical conduction within the DNA strand, and thereby sets forth the behavioral characteristics of the mechanism.

The importance of this paper is, firstly, it shows the power of using machine theory in bio-chemistry, and secondly, it shows the relevance of the idea magnetic continuity exists through p-orbitals. Overall, this paper allows a whole new understanding of biological function, and indeed, it gives us new ideas about the nature of life.

5.1 Introduction

In the forthcoming article, an attempt will be made to explain the DNA/chromosone's biological behavior according to machine

principles. It will firstly be shown how most of the DNA's behavioral characteristics are attributable to the electrical, magnetic, and mechanical properties of the DNA as a small entity molecule. Subsequently, it will be shown how the molecule, when viewed as a large scale machine, is a dynamic mechanism which is stimulated by extraneous physical energy sources. The pivotal assumption in this analysis is the assumption which says all organic atoms exhibit magnetic continuity through their p-orbitals. Aside from this, various new concepts in electromagnetic machine engineering will be entertained to explain the DNA's behavior. These include the relationship between electrical winding patterns and the arising charge dispersion characteristics, the phenomena of electrical conduction through the stacked tube-like sugar rings of the DNA, and torsional dynamics as seen in the dispersion characteristics of DNA. Be prepared for a rigorous foray into electro-mechanical machine thought.

5.2 The DNA Engine

The ability to think of molecules in terms of machine mechanics requires a high degree of mental clarity. It is particularly essential to be able to envision the machinations within one's mind, and to therefore see the inherent logic in this discourse. Accordingly, we begin by examining a diagram of the DNA "slice" with the aim being to decipher the mechanical aspects of this small section of the molecule. In it, it becomes apparent the availability of electrons exists in the acidic outer portions of the molecule. This occurs because of its coexistence with a base. Therein, the molecule is assumed to be in a reacted state in the sense the acid has given off its hydrogen atom and the base has given off its hydroxyl molecule. (Subsequent study will show this is conditional on chromatic influences.) As this occurs, the base is left with a positive electrical charge, whereas the acid has a negative charge about it. To balance these two charges as they exist side by side, charge movement must occur. Obviously, this movement can not come from the base because there is no free proton to give up. However, the acid is quite capable of giving up an electron to facilitate the resolution of the attractive forces. Hence, the stage is set for the movement of electrons away from the outer edges of the acid and in towards the bases. **Fig.1**

On charting this course from the acid to the base, the elec-

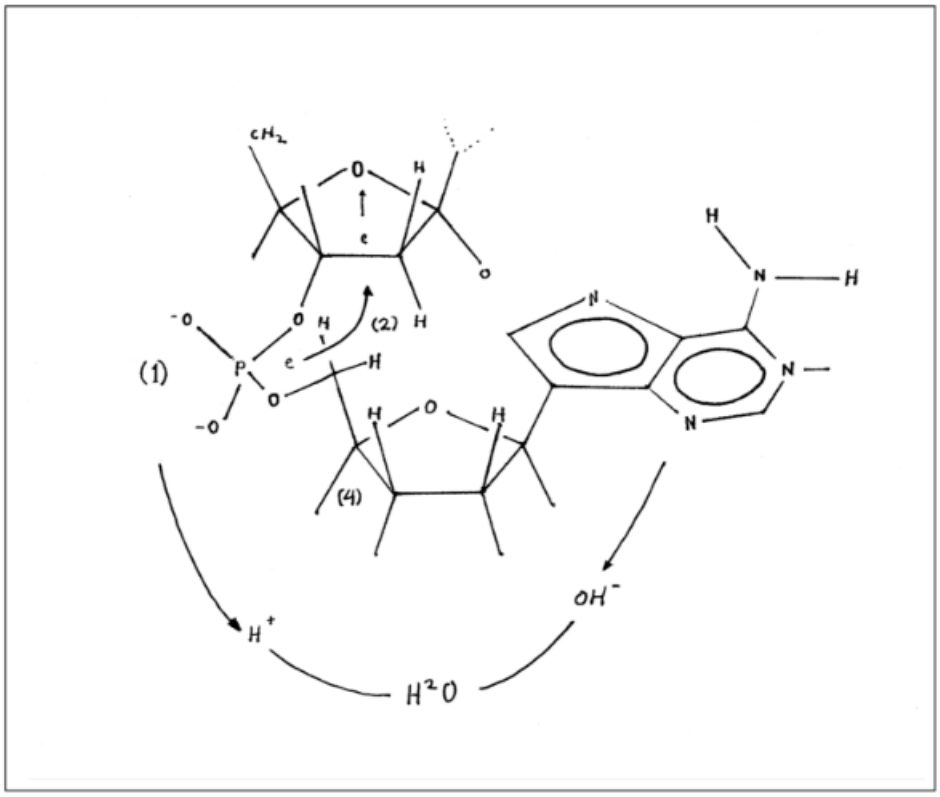

Figure 5.1: Electron Shifting In Dna Molecules

Key : The numeric indicator (1) shows the acidic area which can donate electrons for charge balancing in the molecule. The numeric indicator (2) the area of trajectory deflection of the charge balancing electron, and the indicator (3) shows the path of the electron up and into the sugar ring. The area around the indicator (4) shows where points of resonation of the sugar ring occurs.
Explanation: An electron associated with the acidic oxygens (1) is drawn inward by the electropositive charge of the base. As the electron approaches the ring of the sugar nucleotide, it is firstly deflected from its trajectory by the electrons associated with the CH_2 molecule (2). Then it is further deflected by its attraction to the hydrogens of the CH_2 molecule. Subsequent to this, the elect on is d awn up and into the adjacent sugar ring. The existence of magnetic continuity through the p-orbitals of this ring structure means the sugar rings project a magnetic pattern which is sympathetic to the electron's magnetic field, and so the initial electrical conduction of the DNA is allowed to occur. The area marked by the numeric symbol (4) shows a resonation point of the DNA molecule. These areas are important for imparting various behavioral characteristics to the DNA.

tron encounters some hazards. Firstly, the course inward is altered by the inconvenient location of the CH_2 portion of the DNA acid structure. Its precise alignment to each side of the vector trajectory of the electron results is the presentation of, firstly, repulsive negative charges, as caused by the proton's electrons, and of, secondly, positive attractive charges as caused by the protons themselves. Compounding this is the significance of p-orbital continuity of the sugar nucleotide rings. This, in essence, presents to the wayward electron a ring of magnetic continuity which is very much the same as the moving electron's own magnetic fields. Hence the sympathetic alignment of these two forces precipitates the movement of the electron up and into the sugar ring of the DNA acid.

This alignment assumes there is another isomerism, besides the stereo isomerism, which is key in the formation of organic molecules. (The author calls this the magnetic isomerism.) It is important to note the ability of the electron to stay within the sugar tube is founded on two key attributes the desire of other acid areas to recapture lost electrons, and the tug of the base's positive charges. The physically discontinuous "piping" of the base sequences, and the desire of these bases to capture electrons in their kekule clouds, leads to the proposition no conductive type behavior can exist in the bases.

The next question to be ask is what happens to an electron upon entering into the sugar-tubes of the DNA? Further study of the engine mechanism is needed to answer this question. First, note how the electron has been drawn into the sugar tube in a specific direction. Now, since the DNA strand contains two right-handed sugar tubes, this means the natural propensity of the molecules is to move electrons in a diploidic fashion, e.g., the electrons in each sugar tube counterpoises the other in movement. However, now note how the sugar ring molecule is a potentially resonate structure as caused by the unsymmetrical pairing of oxygen and hydrogen atoms in the lower part of the molecule, and in the unsymmetrical pairing of carbon and hydrogen in the upper part of the sugar molecule. It could be said these two unsymmetrical pairings balance out, but their duality, plus their lack of identical counter-balancing leads to the conclusion the sugar ring is a resonate structure. (The RNA molecule does not share this resonate attribute.)

There are some peculiarities to the sugar ring's magnetic resonance. The heavy mass of the phosphate linkage, and the strong oxygen bonding associated with it, essentially stabilizes the ex-

terior of the atom against resonation. This, in turn, causes the resonation to be internal, and therefore to be synchronized with the sugar rings adjacent to it in the double helix. What effect does this have on electron movement? Recall how the sugar ring has magnetic continuity through it. Accordingly, the magnetic fields are resonating, and this resonation forces the sugar ring's inductive properties onto the electron. Furthermore, as one sugar ring is squeezing inward, its mate is expanding outwards, and hence their inductive properties try to propel electrons in the same direction on both sides of the sugar ring. As this occurs over time, the oscillating nature of resonation would mean the electrons behave like alternating current would in a wire.

A question to think about is: What is the physical environment like inside the tube? Excluding the effects of resonation and ph levels on the tube, are there any resistances which can impede the flow of electrons through it? Is the environment able to support superconduction? The answer to such a question is up to the reader to surmise, but the existence of super-conducting sound emanating from within cells has already been documented, and it leaves me to believe this is the case, but only under certain conditions. Conditions which may affect the ability to super-conduct are the same as those that affect the free flow abilities of the electrons, namely resonation. This property of resonation is therefore not thought to be the homeostatic norm of the DNA, but a condition forced upon it by the presence of peripheral electrical, magnetic, and ionic activities. It occurs naturally when the DNA is exposed to these fields, but when the cell's nucleus somehow becomes isolated from these extraneous influences, then direct conduction is thought to occur. Before considering these isolation conditions, we should examine some of the implications of the two types of electrical activity, e.g., direct conduction - which turns the twin sugar tubes into electrical dipoles - and oscillating conduction - which turns the two sugar tubes into a common direction oscillating conductor.

5.3 DNA Strand Dynamics

When considering the DNA as a machine, there is much more to look for than just electro-conductive properties. There are many mechanical peculiarities to the double helix type structure. The easiest way to examine this is to twist a rope out of a piece of string, and to examine the torsional dynamics of coiling and super-

coiling for yourself. By doing this, the forces which elicit various types of behavior in the DNA helix can more readily be understood. In terms of the DNA, the rope is already twisted and the electro-conductive aspects of the DNA internal structure are influencing the nature of the twisting. **Fig. 2**

In one instance, internal influence might cause over-twisting or super-coiling of the DNA, and in another instance, it might lead to the dissolution of super-coiled areas. To sort out the implication of this behavior, consider how the diploidic type of electrical conduction affects the torsional dynamics of the DNA strand. As shown in the accompanying diagram, the electromagnetic field forces caused by the moving electrons are such that they seek to over-twist the DNA strand. This occurs because the opposing fields of the dipole seek co-alignment with each other. Over-twisting of the DNA leads to the consolidation of the chromosome. This happens because overall tension on the helix windings is increased. An attempt by the reader to over-twist the rope model will show the same conclusion being drawn. By correlating this data with known behavior of the DNA/chromosone, it becomes obvious direct current flow (possibly super-conducting), through the sugar tubes occurs when the DNA is replicating. The phenomena of chromatic condensation is precipitated as this process takes place.

Local untwisting of DNA is the end result of a situation where the DNA is subject to resonation by exterior forces. Therein, electrons are flowing in the same direction at the same time, and the sugar tubes on either side of the DNA complex are trying to align by straightening. They are trying to straighten because the angle of each tube off an imaginary baseline through the middle is only about thirty degrees. Therefore, the shortest path they can follow to relieve the magnetic pressure is to straighten out. As can be demonstrated by using the rope model, this type of torsional effect leads to the dissolution of the chromosome within the nucleus of the cell. Accordingly, the stage is set for RNA synthesis within the nucleus.

As deformation of the DNA by electron conduction causes the hydrogen bonds in areas of the DNA to break, it prepares the DNA for either its own re-synthesis or for the synthesis of RNA.While polymerase are responsible for the actual activity of this synthesis, the contribution of the DNA strand to the coordination of the activity should not be ignored. Specifically, molecular formation is coordinated by electromagnetic fields emanating from the DNA.

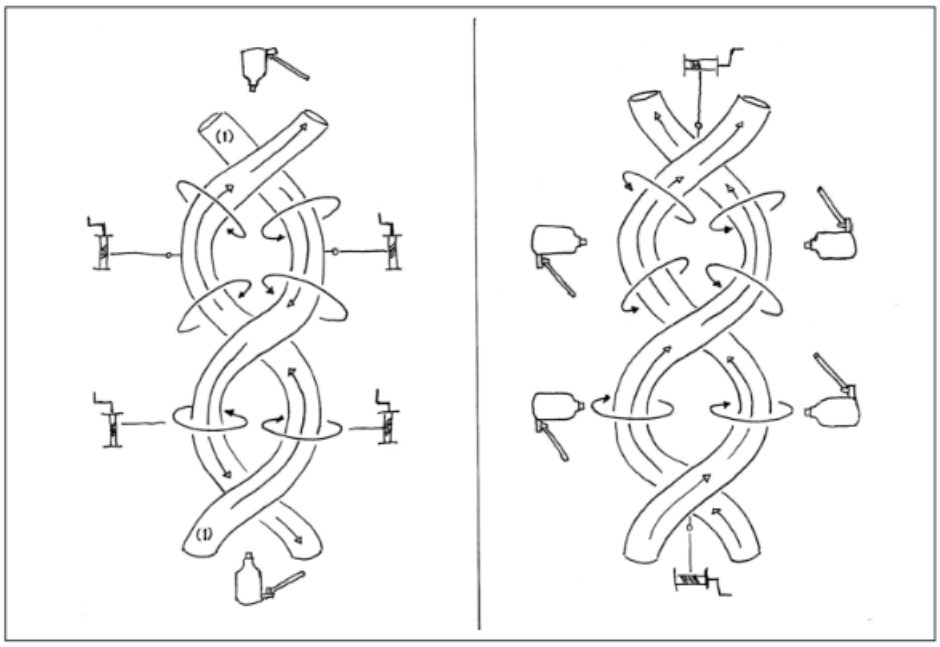

Figure 5.2: Torsional Dynamics Of Electrical Conduction In The Dna Helix

Key : The number (1) indicates the DNA's sugar tubes. The solid line vectors indicate direction of electron movement in the DNA during its two types of conduction, e.g. D.C. diploidic, and A.C. sympathetic, and the circular vectors indicate the developing magnetic forces. The winch symbol shows the tension applied to the helix by the two types of electrical conduction within the DNA. The bottle jack symbols show the compressive forces put on the DNA helix.
Explanation: Diagram (a) shows how the developing magnetic forces of diploidic direct current conduction within the DNA's sugar tubes causes compressive forces to be put on the DNA helix. These forces seek to condense the DNA into a chromosome structure, while at the same time breaking hydrogen bonds at the points of the greatest stress. This process allows DNA replication to occur. Diagram (b) show the magnetic forces which develop when the DNA experiences sympathetic alternating current conduction in both of its adjacent sugar tubes. This time, the forces are seen to elongate the DNA helix and to cause its dispersion within the nucleus. This sets the stage for the production of RNA.

In the case of a super-conducting DNA, these forces would be remarkably strong, and as such, would work quickly to coordinate the alignment of massive numbers of molecules within a very short time-span. Furthermore, this force would preserve the magnetic isomer of the sub-components.

One facet of the DNA's ability to coordinate the re-synthesis of itself is found by examining how longitudinal variance in magnetic intensity occurs as electrons move within the sugar tubes. When the DNA strand is over-twisted and opened for replication, the two sugar tubes are a ninety degrees to one another. The sugar rings along the length of the replicating area partially shield the emanation of magnetic fields, while the more or less gaping areas let it freely through. The bases can move closer in the shielded areas, while the sugar rings needed for replication move to the central magnetic areas. The polymerase works to preserve the magnetic isomer it sees.

In RNA synthesis, the process is much the same, but the intensity of the activity is very much diminished. This time, the DNA deformation and hydrogen bond breaking is an activity of much shorter duration. Again though, the facet of molecular formation by magnetic coordination is plays its role. In this instance, its dynamics are very much changed. Whereas the magnetic grid of DNA formation was a cross matrix formation as caused by the sugar tubes being over-twisted, this time the sugar-tubes tend to be parallel to each other, and this is thought to somehow key the right polymerase and the right molecular substructures into the area. In considering RNA synthesis, it is interesting to think on the effects different periods of oscillation within the sugar tubes have on the type of RNA produced. Would a longer RNA strand result from a lower period magnetic oscillation? Are there certain areas of the DNA more sensitive to some frequencies of oscillation then others? Where do these oscillations come from? What controls changes in the periods of oscillations? Why are cells in close proximity different? These are all questions we have yet to answer.

5.4 Chromosome Communication

Because internal torsion is caused by electrical conduction ln the DNA, the DNA consolidates into chromosomes. In the course of this consolidation, the DNA coils itself into patterns which are much like magnetic windings. These winding patterns will not oc-

cur randomly, but are carefully designed through the use of introns and extrons to allow a very specific folding pattern to occur. In doing so, the DNA in the haploid chromosome becomes a very distinctive electromagnetic structure. The "coils" of this electromagnetic structure are the DNA super-coils, and the behavior of the device is subject to the various laws of electromagnetic transmission. Furthermore, as each DNA haploid becomes paired with a closely similar mate, the resonation of the individual haploid chromosomes must be in synch with and sympathetic to its mate. Let us look at some of the aspects of this mating. Firstly, it can be said a haploid is seeking to become resonate through the induction of oscillating magnetic fields. The reasoning is the DNA has just finished a direct conduction stage, and now seeks resonation, not only within the DNA internal structure, but also, analogically, within the super-coils of the structure. The pairing any haploid seeks is a relaxation pairing, one where the magnetic interaction of the two haploids will cause each haploid's DNA to become resonate. Therein, the DNA's torsional structure is searching for its homeostatic midpoint. In trying to reach the homeostatic midpoint, the DNA/chromosome begins a process of RNA synthesis. This happens because the natural predisposition of each haploid's DNA strand to direct conduction is transformed by the effects of mutual diploid induction into a desire for alternating current flow within the sugar tubes. **Fig. 3**

Some conditions appear to apply to the pairing of chromosomes. Firstly, the chromosomes which do not pair, the sex chromosomes, are thought to be self-resonating structures. They already bear the diploid type symmetry of paired chromosomes. This self-resonation is important when the process of meiosis occurs. It becomes the driving force as the haploid chromosomes seek solid formation and productive inactivity. It appears it is impossible for the haploid's DNA to resonate without the stimulation of the right frequency and the right energy patterns from its prospective haploid's DNA. The process of direct conduction cannot quite stop.

In pairing, it may be noticed a chromosome undergoes various electron shifts as the structure consolidates. The centromere appears as a physiological wrapping of the center points of the haploid pair. This wrapping may be orchestrated by the energy dynamics of the RNA producing chromosome. The tips of the chromosome are seen to be alternating in polarities while an electrical vector circles the center of the diploid structure. It is thought a protein is

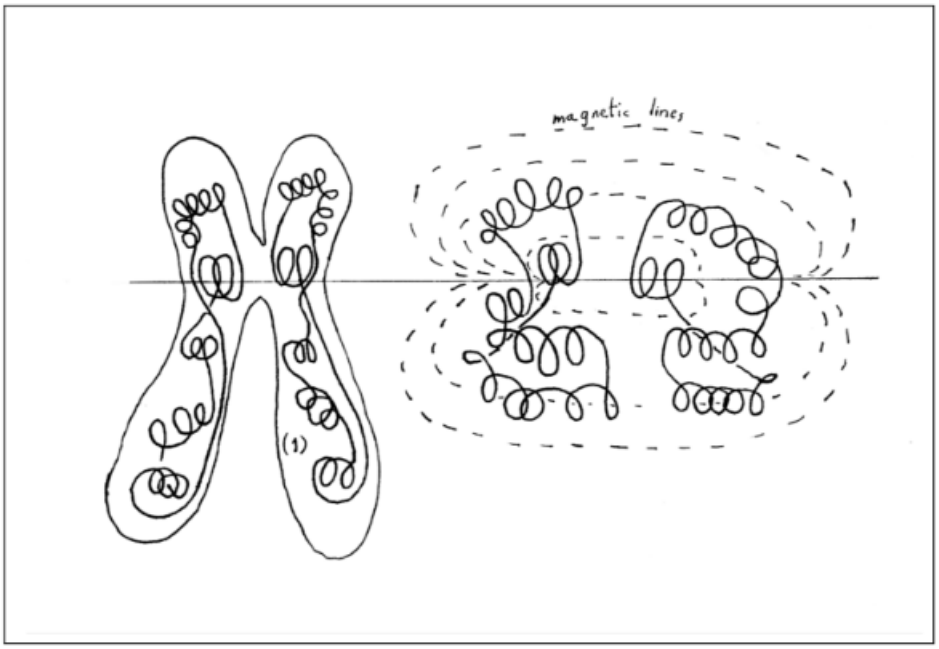

Figure 5.3: Complementary Pairing Of Chromosomes

Key: (1) indicates a diploid chromosome.
Explanation: The wire filaments within the chromosome represents DNA strands. The chromosome on the left is consolidated and at rest. the chromosome on the right is in a state of dissolution. The broken vector lines show a possible magnetic pattern which develops within the operating chromosome dipole.
Explanation: The first part of the diagram shows how two complementary haploid chromosomes share similar winding patterns throughout their length. It is thought this encourages their bonding as oscillating electrical current within the DNA establishes a one hundred and eighty degree phase relationship between these haploids, thereby allowing magnetic attraction. The second part of the diagram shows how the "engaged" chromosome disperses into a dynamic electro-mechanical structure. The dominant genes likely arise from the genes which are under the greatest mechanical stress, and hence have the greatest sensitivity to the breaking of their hydrogen bonds.

manufactured which follows this electrical vector and henceforth, wraps the two chromosomes together. Obviously, this is one of the first proteins produced, and its production begs the question, why are some proteins produced before others? Put in simple terms, the answer is design factors. The activation of the RNA production by electron oscillation within the sugar tubes is mediated by its design factors. The parts of the chromosome which are under the greatest stress as caused by the induced physical energy forces (frequency, direction and magnitude), are those which will break hydrogen bonds and produce RNA. In the pairing of the chromosome, the centromere RNA must be one of the first to activate because the act of pairing itself has put a the greatest amount of physical stress on this region of the genome. Indeed, this stressing process would cause dominance of certain genes in terms of which haploid produces which protein.

There are other ways for DNA to express other than self-influence. It seems reasonable to picture the entire genome structure as a study in the structure of physical sensitivity. The mechanics of this sensitivity is best grasped by looking in depth at the differentiation environment.

5.5 The Physics of Mitosis (Simplified)

To understand the process of mitosis, we must first determine what causes the synthesis of RNA to shut down, and the process of replication to begin. One way to do this is to consider the events which lead up to this avalanche decision. We know in the newly created cell, large amounts of ATP and other DNA constituents have been used up, and hence the cell's cytoplasm is relatively clear from a radiographic viewpoint. There are not as many molecules floating around which can absorb the electrostatic fields and electromagnetic oscillations which would otherwise present themselves to the DNA/chromosone. Accordingly, more energy is presented to the nucleus of the cell.

As the energy reaches the nucleus of the cell, it stimulates the DNA to produce RNA in copious quantities. At first, this process continues unhindered, but as time progresses, the cytoplasm begins to fill with new compounds which are the end results of RNA synthesis. The cell is beginning to become shielded. While this happens, the energy system of the DNA is competing with the energy system being imposed on it from the cytoplasm and

otherwise, and hence the nuclear envelope has become a distinct mediation point. As shielding progresses, and prophase begins, the DNA begins to win its battle against the extra vivo forces, and the nuclear envelope begins to loose its mediation role. The cytoplasm has absorbed the energy before it reaches the DNA. With this occurrence, the nuclear envelope begins to dissolve, and the conditions become ripe for the replication of the DNA. The process of direct conduction within the DNA begins. The chromosome's centromeres loose the physical environment which precipitated their bonding, and the centrosomes gain the physical environment necessary to create the mitotic spindle. What is the nature of this environment? The answer may be found by matching the pattern of the mitotic spindle's displacement with common physical patterns. On consideration, it instantly becomes obvious this pattern is of an magnetic hemisphere, and the existence of a distinct electrical polarization outside of the cell further indicates it is a bipolar field. This type of field initiates the the conductance which makes the electrical polarization possible. The question is what makes this bipolar field possible, and the author surmises it arises from the direct conduction's cancelation of its own radiographic effects. Thereby, the linear magnetic fields of the side chains play a key role along the length of the super-coils, and the chromosomes are super-coiled in such a way that the overall pattern presented during mitosis by each chromosome is similar to a bar magnetic, with a specific order of ascendency in polarity preferences among all of the chromosomes. Hence,the chromosomes can line up in order along the axis of the magnetic hemisphere. **Fig. 4**

When the process of DNA replication is completed, there exists two chromosomes were once there was only one. It may therefore be assumed the overall radiosensitivity of the cell structure has been doubled. The chromosomes are set to soon become electro-oscillating mechanisms again. In the process, the energy forces of each new chromosome pair repulses its replicated mates while maintaining its position in the magnetic hemisphere' axes. The bar magnet effect account for this repulsion. This stage is commonly called metaphase.

Anaphase happens next, as the oscillating dynamics of each chromosome begins to set up energy fields which helps drive the replicated chromosomes apart. The polarization exterior to the cell begins to collapse, but in doing so, reverse induction helps to maintain the magnetic axis of the structure.

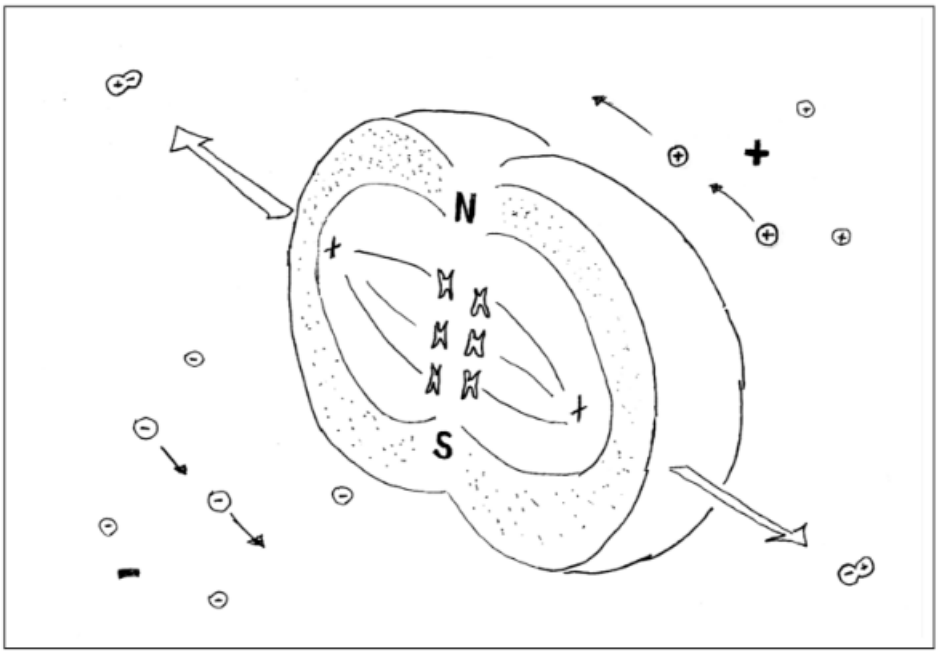

Figure 5.4: Magnetic Isolation In The Cell'S Nucleus

Key: In this cut-away diagram of an idealized cell, the encapsulated positive and negative signs represents ions, the letters N and S represents magnetic polarities, the large vectors show the electromotive effect of the configuration on the cell, and the small vectors show the motive effect of the configuration on the ions.
Explanation : The dividing cell, in its simplest form, is like a collapsing bipolar glob. The electrical polarization of the structure is precipitated by the electromotive forces of the consolidated chromosomes' structures. To allow this to occur, the cytoplasmic area is filled with radiographic absorbing molecules. This allows the isolation of the nucleus from radiographic effects. Note the magnetic and electrical polarities could be reversed, hence the diagram has two different iterations.

In the anaphase of the cell, the migration of the chromosome groups upsets the magnetic balance which made the mitotic spindle possible, and therefore the magnetic hemisphere and the mitotic spindle collapse. The stage called telophase then proceeds, as the energy release from the oscillating chromosomes forces the cells apart, and this concludes the replicative process.

The most important points of understanding the mitotic process is the creation of the magnetic or electrical hemisphere. This sphere makes possible the non-oscillating flow of electrons in countering directions within the sugar tubes. It is this flow which is all important in this stage of the cell's life.

5.6 Questions and Answers

Q. Is there such a thing as "junk DNA"?

A. No, the parts of the DNA strand which are not templates for protein synthesis serve as a vehicle for determining the winding patterns of the chromosome. These winding patterns determine the sensitivity of the gene to various types of electrodynamic fields and oscillations. In terms of of medical study, the winding patterns and their electrodynamic sensitivities may be as important to catalogue as the genome itself.

Q. What are the "cellular events" which control gene expression?

A. The answer to this question is very complex, requiring a conceptual electrodynamic theory of morphogenetic growth and cell differentiation. The unified field equation represents this theory in the mathematical sense, and interpretation of it has lead me to develop a fairly clear idea of the mechanics of cell differentiation. The rest of this book searches for the answer.

Q. Do polypeptide molecules show energy patterns and are they in any way similar to DNA?

A. One of the truly fantastic things about considering the electrodynamics of a polypeptide is how we are again looking at devices which have as the basis of any machine function something akin to "magnetic wire". In accordance with the peptide's winding patterns, these "magnetic wires" set up electron dispersion patterns, movements, and oscillations. In this light, pleated sheets and coils take on new meanings. For example, it can be shown how enzymes create an electrical gradient (voltage) by cleverly combining coils so as to produce an electron rich area, and by then adding direction

to this area through pleated sheets. The insulin molecule is a good example of this structure.

5.7 Conclusions

It is now fairly safe to say the biological activity of the DNA is a manifestation of electro-mechanical principles. As such, it remains for the researcher to corroborate and refine the precepts presented here. There are very many subtle qualifiers to its principle parts, and these qualifiers require further analysis. Overall we can recognize this is just the start of a new discipline of electro-mechanical chemistry as based on the principles of reductionism. At last, we have in our hands a practical and simple way of understanding biological function. We can look at life itself the same way a engineer looks at a machine, at once appreciating its utility while contemplating its design.

Notes

Chapter 6

Aspects of Morphogenesis

6.1 Differentiation Energetics

The Atlas equation shows how the action of physics upon chemistry yields biological function. A study of DNA machine theory brought us further with the idea DNA is a quasi-conductor of electrons. A study of morphogenesis will now begin to focus on how electromagnetic energy activates the cell's DNA.

In chapter five a very simplified interpretation of the process of mitosis was presented. It ignored the aspect of differentiation and its role on the mitotic development of the cell. Clues about the physics of differentiation are easy to see, however. We begin by observing the spinal cord is a dipole. This means one side of the spinal cord carries the electrical impulses upwards and the other carries it downward. Dipoles are very dynamic constructions. They are tensor fields. They can radiate energy in very distinct primary standing wave geometric patterns, and since they are also electromagnetic, they can generate not only complex secondary $\boldsymbol{E}$ and $\boldsymbol{B}$ patterns, but also physical movement patterns. There is a very geometric aspect to this process, and this geometry is important in studying the physical energetics of the body.

The patterns which cause differentiation are very much in in evidence upon the examination of tissue types of the body. The simplest structure is the spinal column with its electrically diploidic structure. The initial differentiation of this structure is thought to

have arisen from the diploidic ionic streaming within the embryo, with the result being the histological structure now mimics the morphogenetic energy structure. In this process is the close proximity of two types of cells. one of these, the neuron line, follows electrical field lines, and the other, the glial group, follows the magnetic field lines of the diploidic structure. This key division of cell lines in close proximity indicates mutually exclusive forms of differentiation can occur as one cell absorbs or is stimulated by the electrical geometry of an energy pattern while the other absorbs or is stimulated by the magnetic geometry of the physical energy pattern. The result is there are two mutually exclusive cell lineages. One lineage, the neurons, follows the $\boldsymbol{E}$ lines of the dipole and the other lineage, the glial cells, follows the $\boldsymbol{B}$ lines of the dipole. The classification of cells according to their lineages is very important in trying to understand the physics of differentiation.**Fig. 1,2**

The neural dipole introduces a electromagnetic tensor field into the embryo. This affect cell differentiation in many ways. All the cells are polarized. Many types of eddy currents are able to occur. Cell differentiation is able to follow these eddy current patterns. What is interesting is the final electrodynamics of differentiated cell structure are biased by the forces put on them by the differentiation grid. For example, the epithelium eddy current is such as to force electrons out of the eddy current's central area, and this force is enough to activate acids by stripping away their loosely bound electrons. So central epithelium areas are more apt to acidity. This type of differentiation is most pronounced in the stomach area. **Fig. 3,4**

The neural dipole should not be considered to be like a copper wire dipole. It can only be described as a "lousy" dipole, and as such it is subject to segmenting. When this occurs, eddy currents in the form of $\boldsymbol{E}$ lines circle around the dipole's $\boldsymbol{B}$ lines and branching occurs. The segmentation of the spine and the growth of ribs are some of the anatomical identities which may then arise. Note how the physics of this type of eddy current differentiation varies from those of the central epithelium structures.**Fig. 5**

6.2 Ion Conductive Pathways

To further understand morphogenesis we must look at how the initial dipole occurs within the developing embryo. Consider how the dipole is linked to the movement of ions within an aqueous

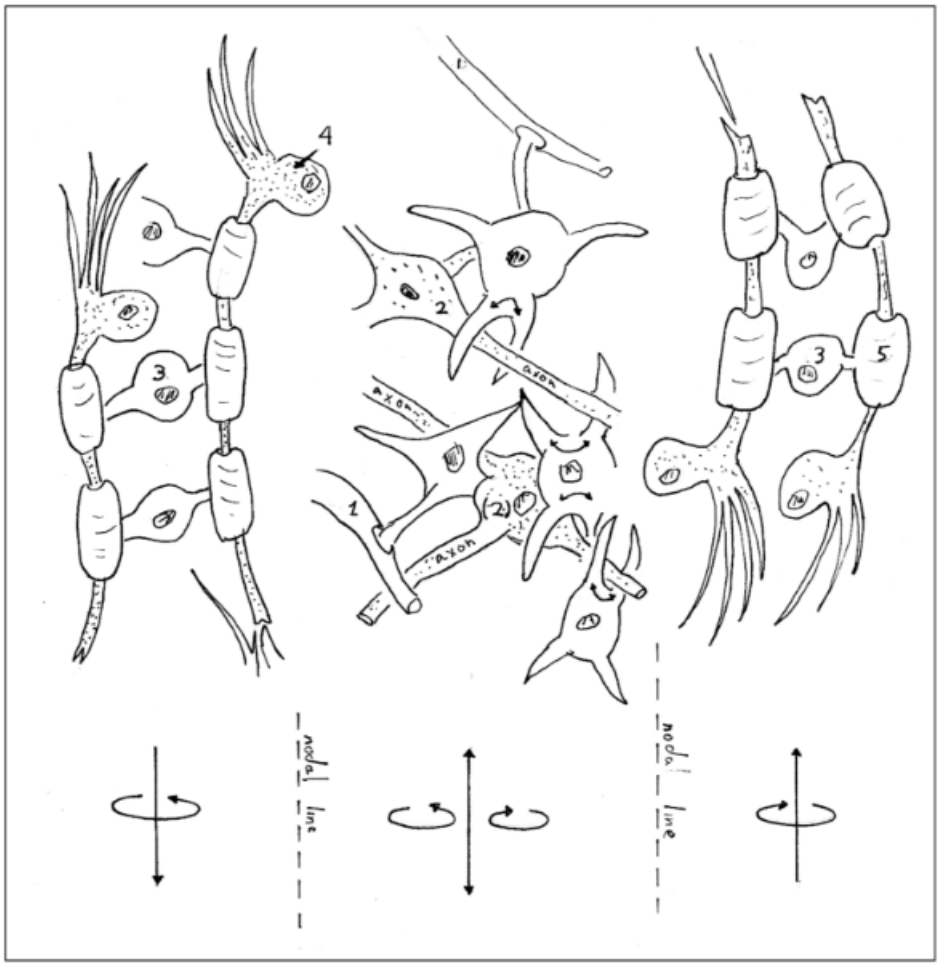

Figure 6.1: The Electromagnetic Histology Of The Spinal Cord

Key :In this diagram, (1) shows vasculature, (2) shows a spinal motor neuron, (3) shows an oligodendrocyte, and (4) shows a white matter neuron. (5) shows a myelin sheath, and (6) shows a astrocyte.
Explanation: In the spinal cord area, mutually exclusive forms of cell differentiation are easily shown. The neurons are seen to follow electrical conduction lines, while the glial cell line follows magnetic field lines. In the white matter, the structure is quite orderly - it follows the respective field lines. In the grey matter area this order continues, but the segmentation of the electrical vectors in the vertical column also allows the crossing over of the neurons. The glial cell line differentiates into astrocytes in the grey area - a very different pattern from the white matter's oligodendrocytes. Cell lineages tend to divide into those which follow magnetic or electrical vectors. Here we see neurons following $\boldsymbol{E}$ vectors whereas the astrocytes and glial cells follow $\boldsymbol{B}$ magnetic lines.(The sharp transition from white to grey matter may arise from secondary standing wave patterns caused by magnetic tensors in the morphogenetic dipole.)

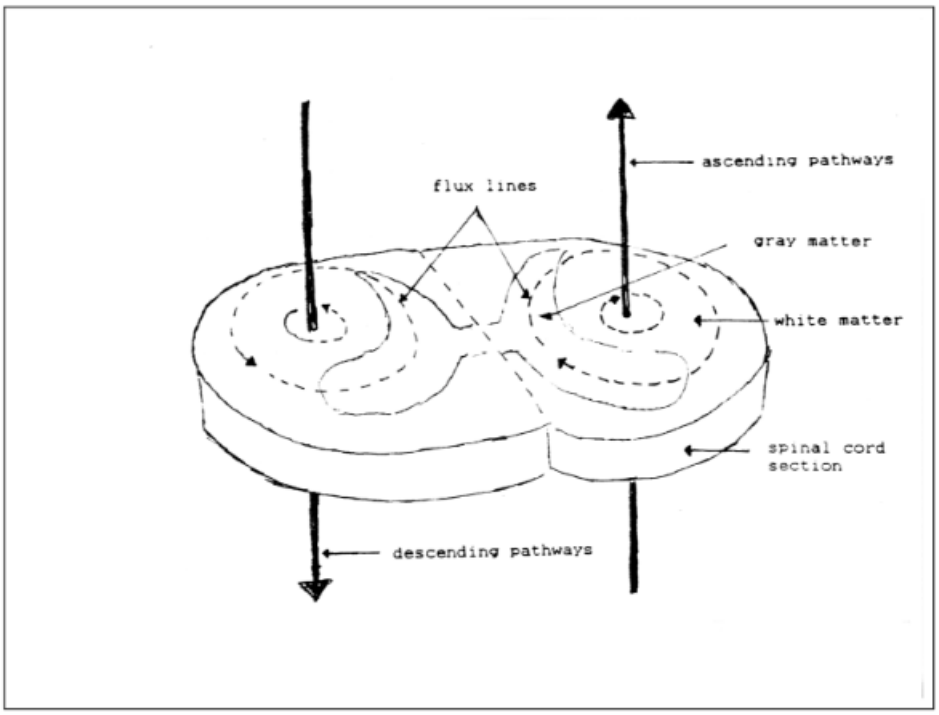

Figure 6.2: The Magnetic Dipole of the Spinal Cord

The spinal cord represents a true dipole. One side moves the electrical charges upward, and the other downward. Dipoles are unique electromagnetic structures. They create a tensor field and can radiate electromagnetic energy outward . Note here the sharp transition lines within the cord of the grey and white matter. These transition lines may represent nodal lines in standing wave patterns within a tensor field.

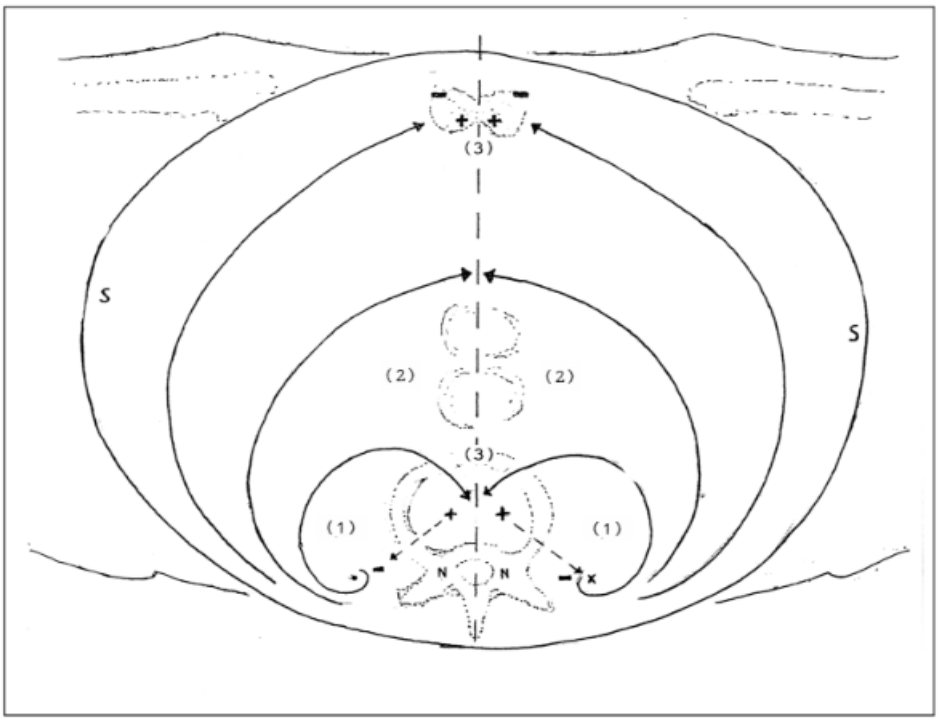

Figure 6.3: Magnetic Vectors in the Differentiation Grid in the Chest Cavity

Key:
(1) The true centers of the dipole are affected by the folding of the ion conductive pathways, and the resulting focal alterations of the magnetic field.
(2) In the central area, the stage is set for eddy currents to form tubular epithelium.
(3) In the thymus area, the steeper angle of the convergence, means voltaic generation and "current" flow are dependent on the appearance of secondary southerly vectors.

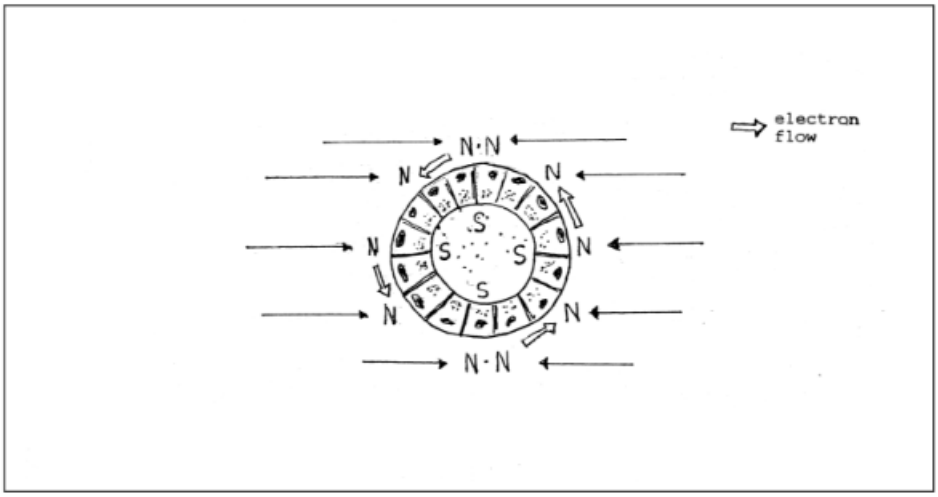

Figure 6.4: Eddy Current Magnetic Patterns in Tubular Shaped Epithelium

Explanation: When magnetic fields of the neural dipole converge, circular electrical flow patterns occur. This type of eddy current sets the stage for epithelium type differentiation. Note how the magnetic field also creates a condition where electrons are easily disassociated from the acids. This puts the acids into a chemically active state. Central hollow areas like the esophagus and stomach appear to result form this type of differentiation energetics.

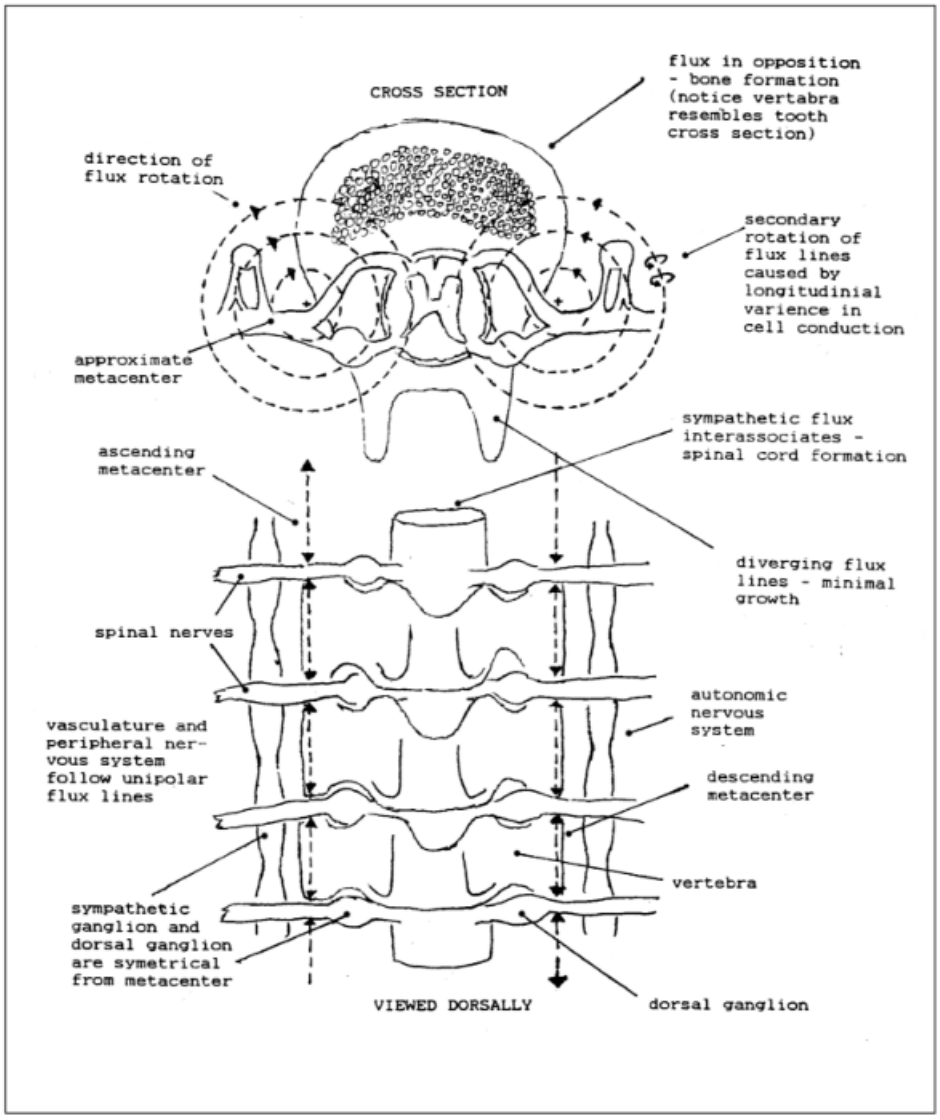

Figure 6.5: Eddy Currents Cause Vertical Segmenting in a Lousy Dipole

Vertical Segmenting occurs as secondary E eddy lines take shape at breakout points in the lousy electrical environment of the spinal area of developing embryo. These breakout lines set the stage for ribs, peripheral nerves, and other systems.

environment. While an anion and a cation may be electrically attracted to one another, the magnetic field of their movement or velocity toward one another works against their pairing. This leads to the concept of diploidic stream of ions in a aqueous environment. These streams, could form into conductive belts which respond to and are caused by physical energy. **Fig. 6-9**

For the streaming of ions in the interstitial spaces of a restrictive cellular environment to have significance in morphogenesis, they would need to form into conductive belts which respond to electrical agitation. These belts would have to fold into helical patterns to insure three dimensional stability. It is like creating a internal river within the embryo to stabilize the electrical agitation. **Fig. 10,11**

Ion drive bands may start as just electrical rivers between the cells, but they quickly become deeply incorporated within neuron cell structure. The neuron itself becomes the pump which keeps the ion conductive pathways and the tensor field alive. This activity appears as a amplification of DNA activity. Herein the idea of growth following the path of least resistance can be seen. As the cell adapts to the physics of the environment, the cell's histological structure becomes a physical representation of the energy pattern.

As the DNA engine begins to exert its influence on the embryo's interstitial environment, it controls the folding of the ion drive bands into the anatomically expected pattern. These physics of these folding points are of great significance, not only for the obvious anatomical manifestations like the pyramidical decussation, but also for the subtle growth of bone joints and other tissue at the nodes. In this we find while the DNA engine may create the ion pathway environment, it is a symbiotic creation as the environment works to control DNA expression. **Fig. 12,13**

6.3 The Heme Vector

The ability of iron molecules to follow and concentrate magnetic fields in a localized area plays a key role in the second stage of morphogenesis. Iron's attributes gives blood components a certain affinity to proliferate throughout the diploidic embryo. There are serious restrictions on this proliferation though and these restrictions relate to the growth bias of the heme vector itself.

The attributes of heme vector are first seen (in reverse) in the umbilical cord, and then clearly noted by growth patterns. Venous

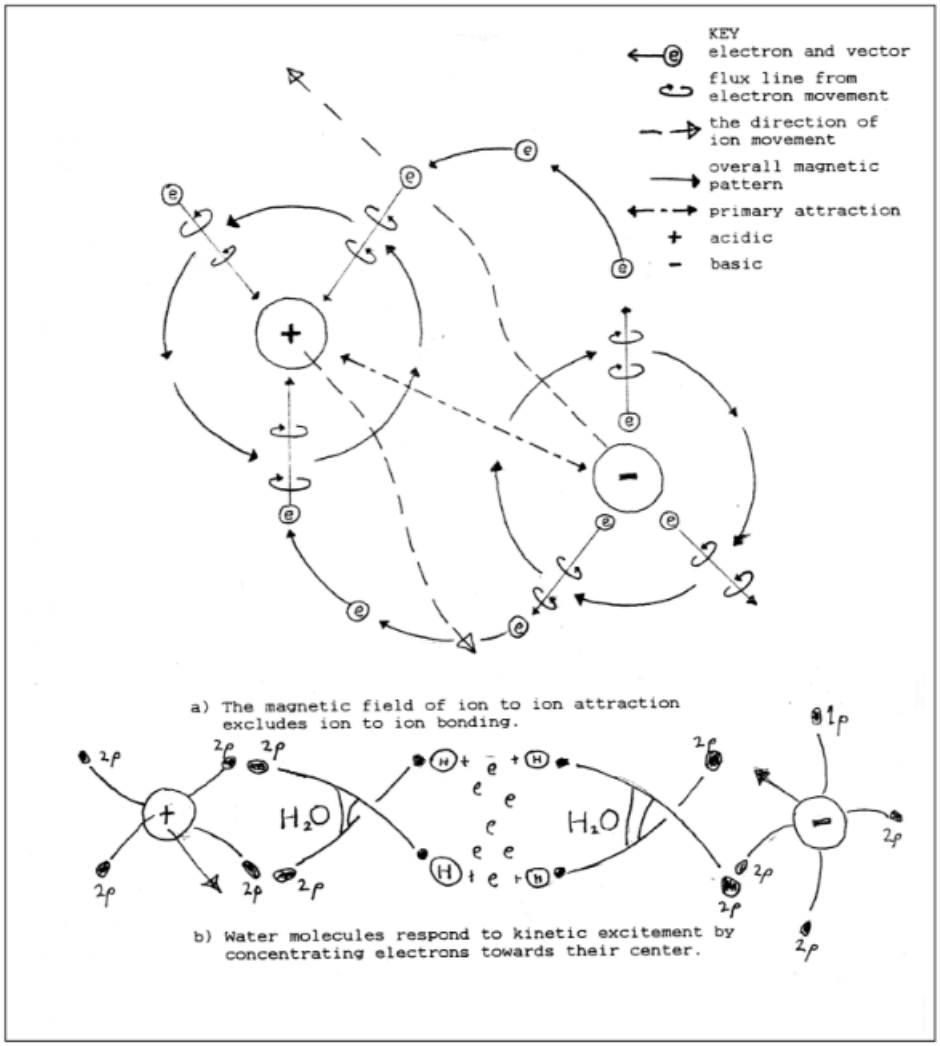

Figure 6.6: Aspects of Ion Flow in an Aqueous Environment

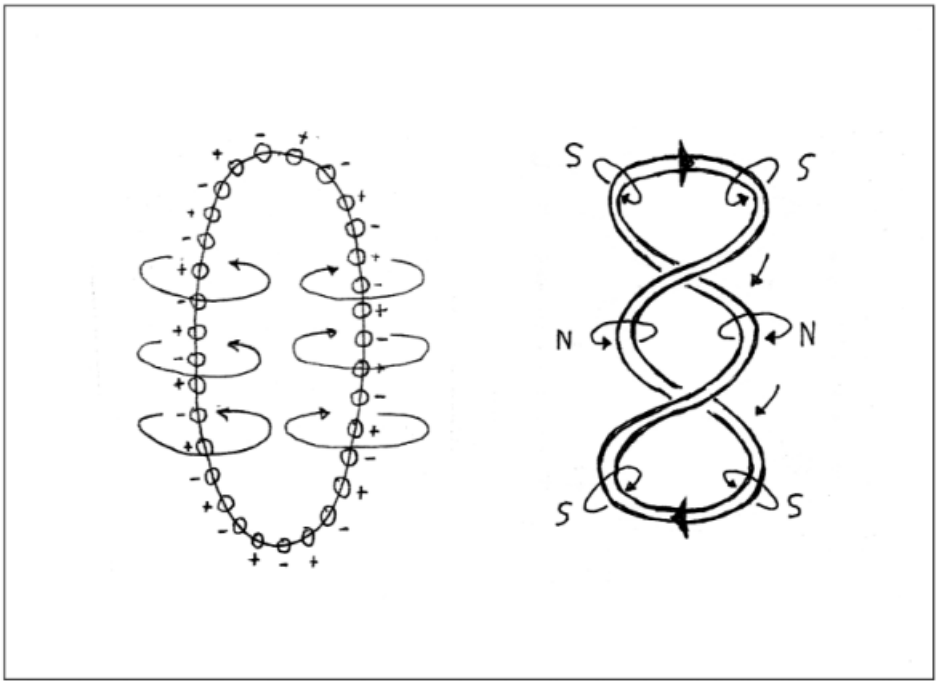

Figure 6.7: The Emergence of Ion Drive Bands

Explanation: Ions, associating as chains, can flow in the morphogenetic environment. To gain stability in three dimensions, they need to take a helical form.

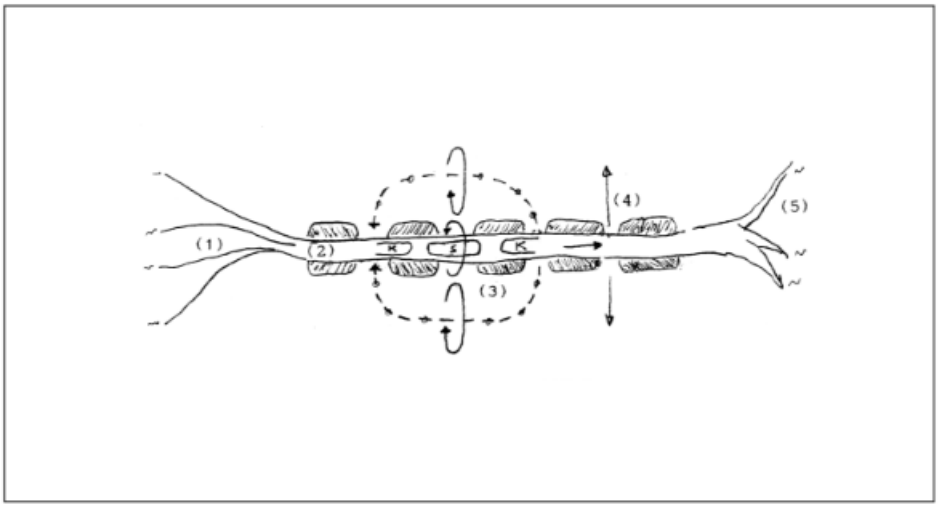

Figure 6.8: Ion Drive Bands in Nerve Impulse Conduction

Key:
(1) Synaptic molecules stimulate ion attracton
(2) Sodium is gathered in.
(3) The magnetic fields of subsequent ion attraction move and condense the sodium charge.
(4) The increased kinetic excitement causes more potassium ions to exit.
(5) The magnetic charge of sodium forces an molecule which is ion attractive outwards.
Explanation: In morphogenesis, ion drive bands become part of the neuron's cell structure.

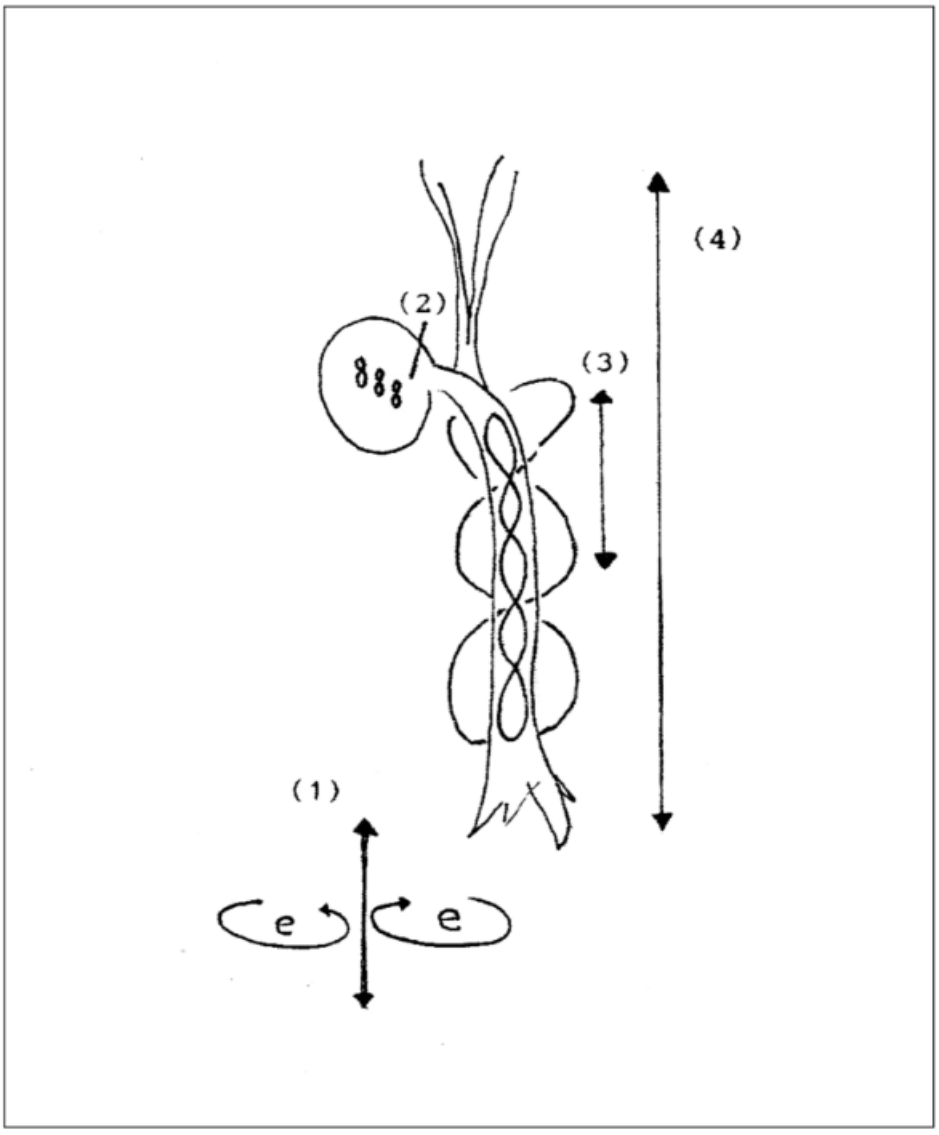

Figure 6.9: Amplifying Electromagnetic Patterns in the Neuron

KEY
(1) Electron density varies with cell body position in the dipole. Dipole angle included, this affects both the replicative ability and the electromagnetic sensitivity of DNA. Higher and stabler electron counts mean greater replicative ability. Lower counts and less stability mean greater electromagnetic sensitivity.
(2) Analogue one, a nodal bar for DNA stimulus.
(3) Analogue two, a nodal bar extra-cellular processes.
(4) Analogue three, a nodal bar for multi-neuron processes.

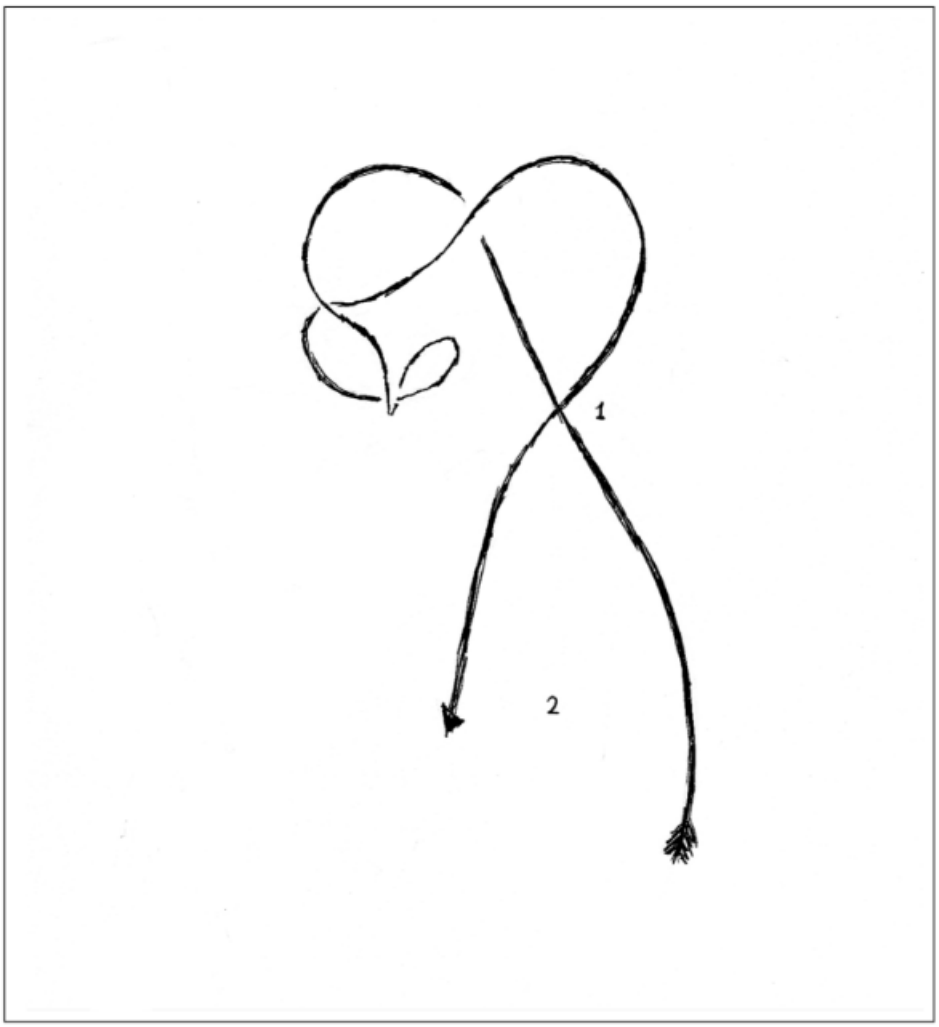

Figure 6.10: Ion Conductive Patterns in Brain Morphogenesis

Key: (1) indicates the area of formation of the pyramidal decussation, and (2) shows the area of spinal cord formation. Explanation : The morphogenesis of the brain is thought to arise from a triple folding of an ion dipole. The first fold is representative of the area where the pyramidal decussation forms, while the area below it shows the dipole area which initially results in the differentiation of the spinal cord. Ion streaming initiates this process in the early stages of embryonic growth.

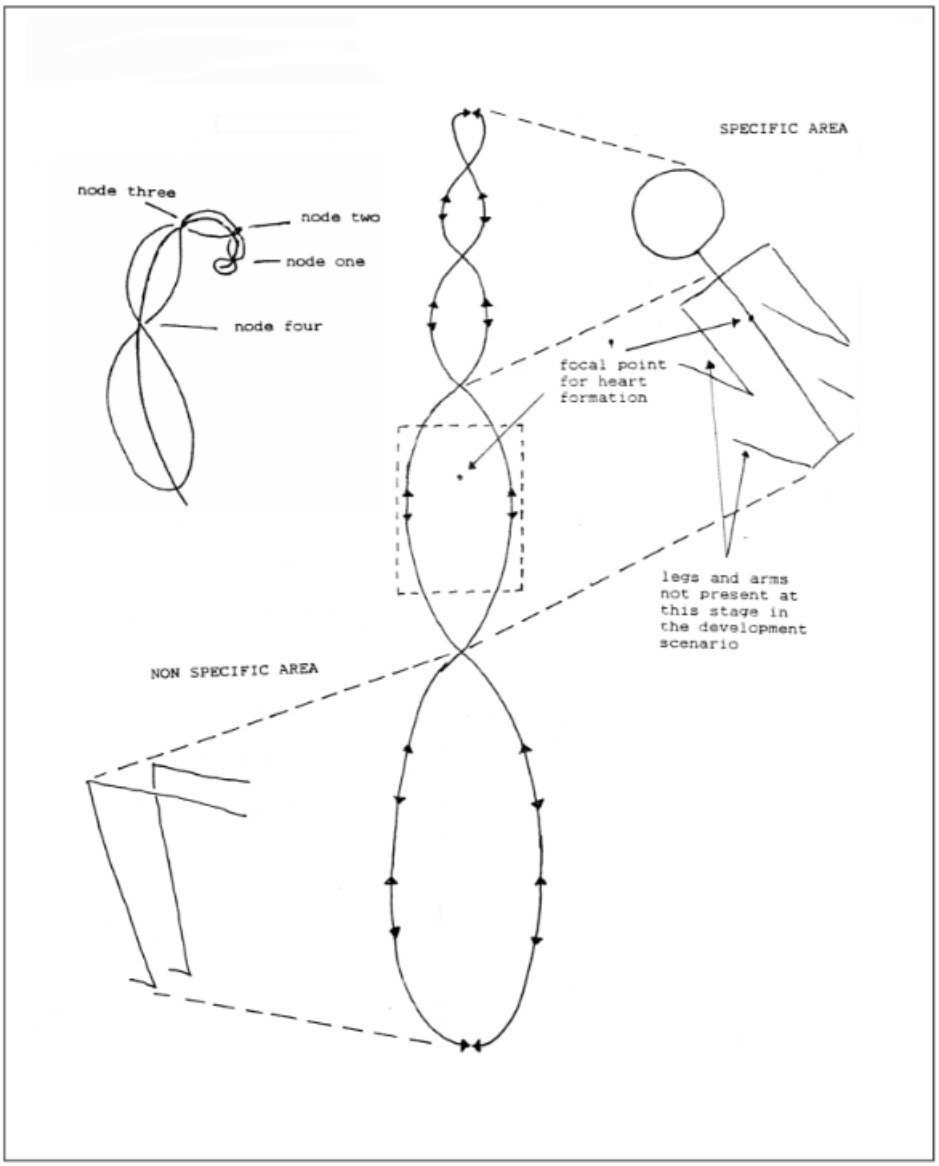

Figure 6.11: Folding Points in Ion Conductive Pathways

As the ion conductive pathways settle in the embryonic environment, distinct nodal points begin to occur. Here we see the formation before the latter complexities of limb budding occur. The inset shows how the nodal points have a secondary curvature in the consolidated structure.

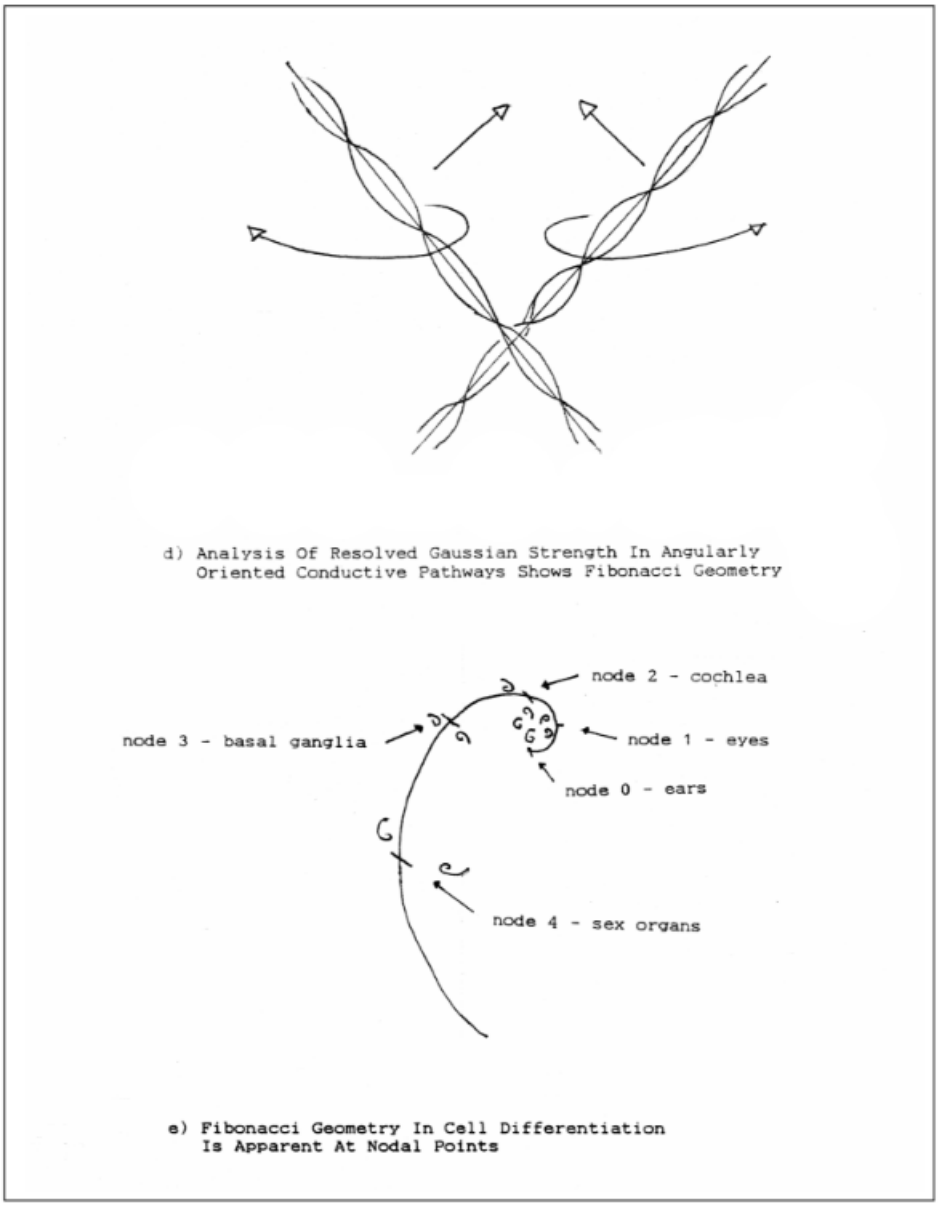

Figure 6.12: Fibonacci Patterns at Nodal Points

Equidistant lines of $\boldsymbol{B}$ magnetic values in nodal point areas exhibit the Fibonacci type shape common in differentiation.

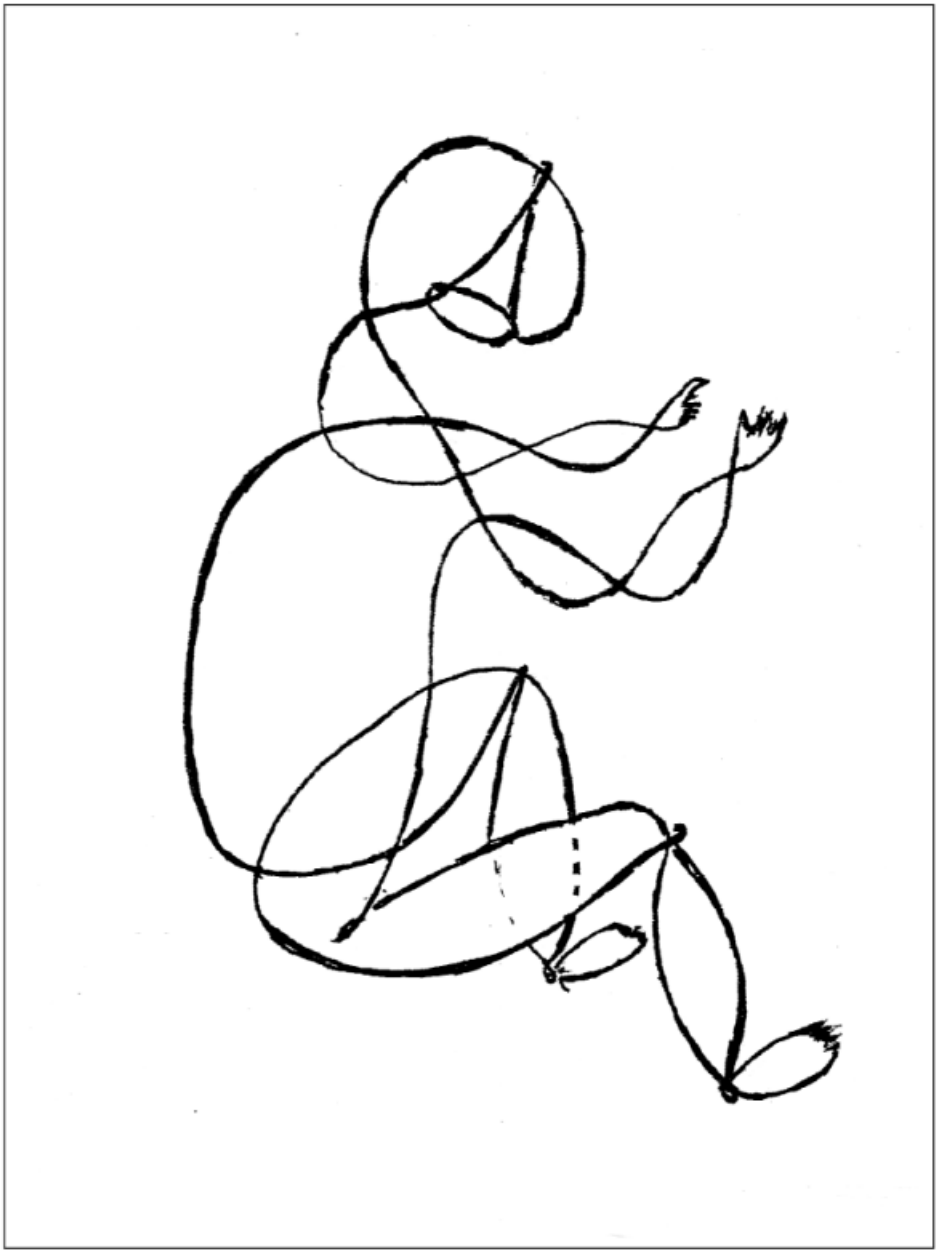

Figure 6.13: A Study of Folded Conductive Pathways

With limb budding, the ion pathways in the embryo become settled.

blood tends to the exterior of the differentiation grid while oxygenated arterial blood tends towards the center. We can assume this relates to how the magnetic properties of blood changes when deoxygenated in the diploidic differentiation grid. The strength of this tendency is controllable by the diploid grid of the neural dipole. In the lung/heart area, the diploidic forces are at their greatest. This increases the separation of the venous and arterial blood to their greatest levels, and conditions are set for the differentiation of heart and lungs system. **Fig 14,15**

Below the heart/lung area, with a demarcation line of the diaphragm, blood flow occurs in a opposite direction in the dipolar grid. This changes the effects of the dipole magnetics on the heme vector and new differentiation patterns emerge. Key in this is the asymmetric region where the liver, pancreas, spleen transect the body and connect with the digestive system. The asymmetry presents an interesting problem. My present view suggests the energetics of this unsymmetrical differentiation arise during the switching of heme vector direction. While the kidneys are down flow related, the liver, pancreas, spleen area is direction crossover related. Experimentation with differentiation energetics should refine the answer.

We must also give consideration to the lymph/immunological system when considering the heme vector. The key note here is the concentration of magnetic lines by the ferrous heme groups leads to local areas which are evacuated of magnetic field lines. These areas of magnetic evacuation are areas where the lymph/immune system finds its physiological basis. With the lymph and blood lines we see have two cell lineages, the blood line being magnetically intensified and the lymph line being magnetic rarified. These cell lines run parallel to one another as the magnetic fields are only evacuated next to the heme groups.

I would like to close with a final note on limb budding. My thoughts on limb budding relate to the four "legs" of the chromosome. As silly as it sounds, limb budding appears to be an amplification of the initial chromosome geometry. As Dna energy is expressed through the chromosome's four quadrant points, the four "legs" of the DNA/chromosome manifest themselves by powering limb budding in the developing embryo.

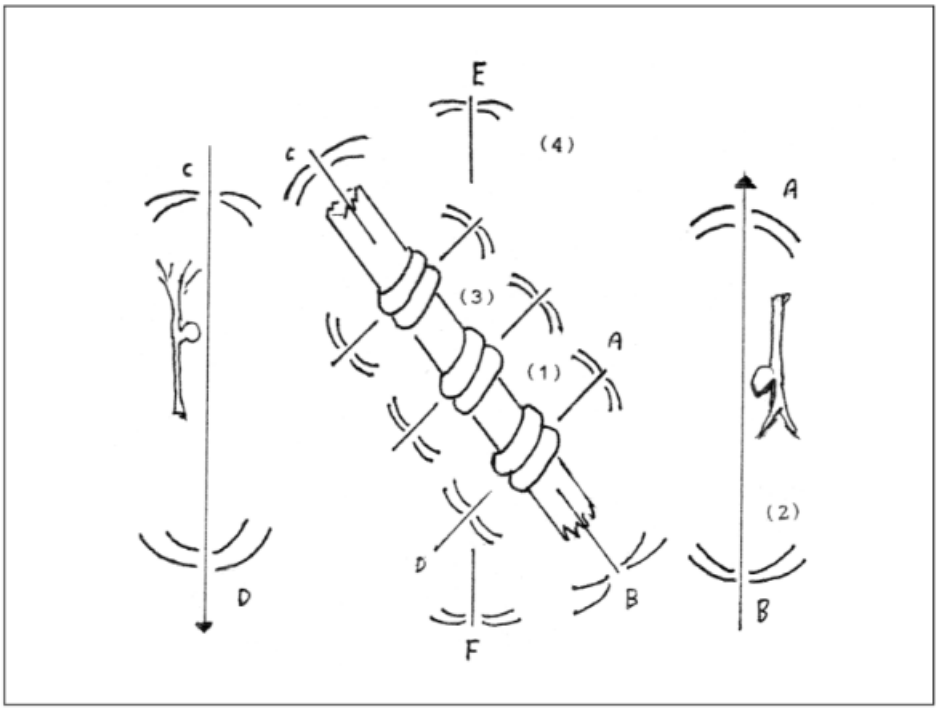

Figure 6.14: The Heme Vector

The heme vector represents how the blood components have unique attributes. The venous blood is pushed to the exterior and with the lymphatic system existing in areas of magnetic field evacuation as caused by the ferrous attributes of the nearby blood components.

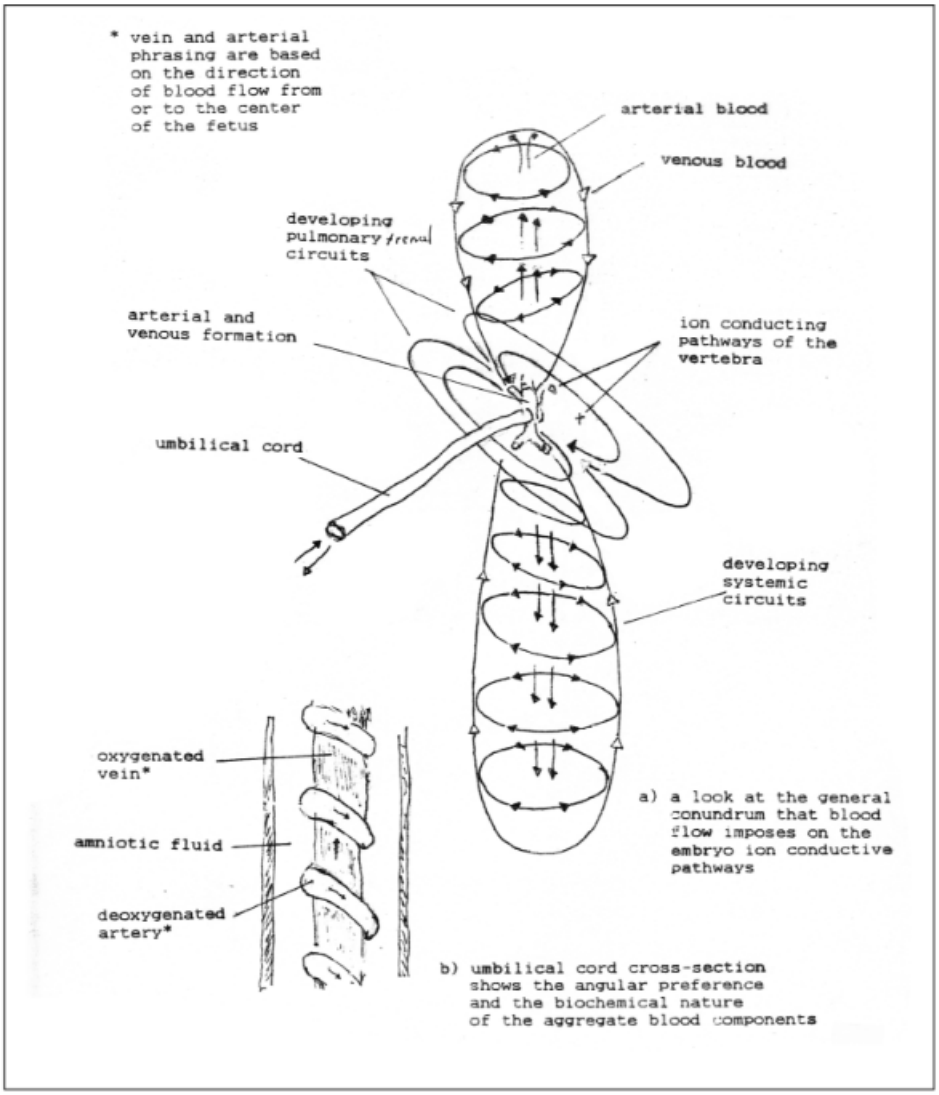

Figure 6.15: Heme Vector Behavior in the Diploidic Grid

The heme vector's movement in the diploidic grid is thought to play a key role in the asymmetric differentiation in the organ region. When the blood flow's heme vector switches direction within the central neural dipole the stage is set for an area of asymmetrical differentiation.

6.4 Electromagnetic Coordination

The study of dipoles[1] in cell differentiation suggest to us we should look at the effects of dipole fields in the environment. Let us begin by looking at the effects a dipole would have on aqueous solution with electrolyte in it. In this case, the electrons, and the electronegative ions, e.g. the anions, are forced towards the dipoles. The affinity these particles have for bipolar magnetic fields causes this. Cations, on the other hand, have much less affinity for areas of bipolar linearity, and hence, tend to be centrally contained by the unipolar magnetic pressure. Accordingly, the center of the containment vessel becomes cationic in charge, and the edges become anionic in charge. A free floating acid or base would migrate to its respective charge areas under these influences. However, when an electron balanced acid or a base is more or less rigidly fixed in the vessel, a reaction would occur. In the case of a centrally located acid, electrons would be stripped, and the molecule would be reacted to the cationic state. If, however, a base were rigidly mounted in the center of the reaction vessel, the molecule could not receive a donor electron to become activated to a anionic state. The suggestion here is there is a switching mechanism in dipole based reaction systems.

With the knowledge dipoles have effects on biochemical reactions, it pays to take a look at environmental dipoles and their possible health effects on people. In this case the dipole force may affect not only biochemical processes, but also biological processes like differentiation. One common source of low level dipole exposure is power lines. While the amount of exposure is very small, long term exposure to these small fields and the geometry of the exposure should be studied. Some may have stronger exposures due to their proximity to power lines.These dipole pockets can occur in many ways, one being the collision of radiating energy sources. These pockets may be transitory in nature, or selective where only certain bandwidths are blocked. A good test for the existence of pockets is to walk around with a pocket radio to find any null areas. **Fig. 17-19**

Converging magnetic fields have medical uses which need to be explored. In situations where tumors need to be destroyed,

[1]This section is paraphrased from "Power, Steven R., An Overview of the Effects of Convergent Magnetic Ionizing Radiation on Biological Function, *Medical Hypotheses*, 1992, **39** 175-181."

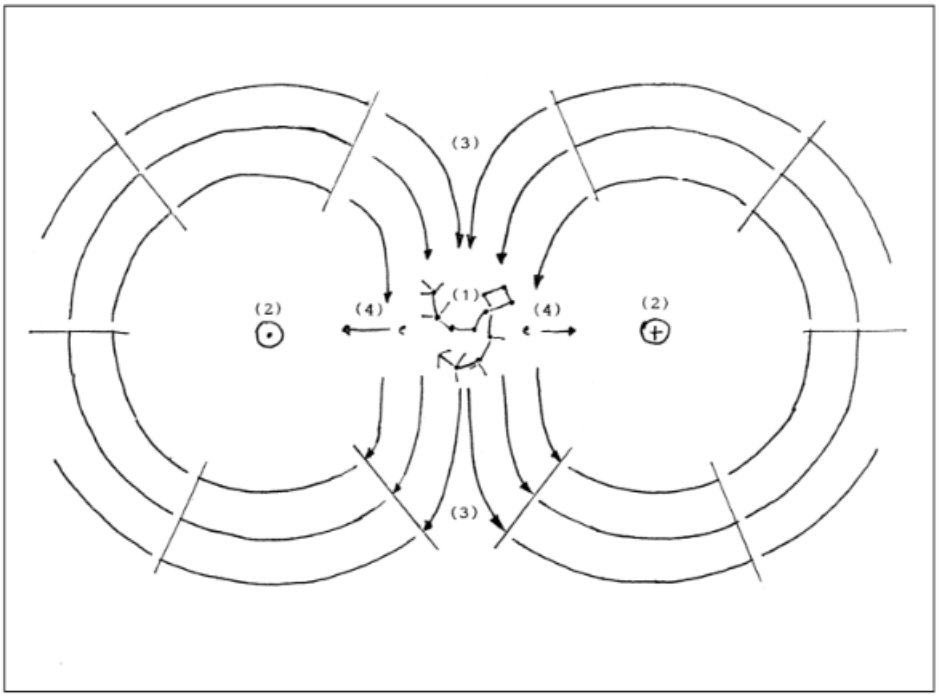

Figure 6.16: Molecular Tension During Dipole Immersion

Key:(1) represents a hypothetical molecule in rigid placement. (2) represents the applied dipole (equivalent to repulsing electromagnets. (3) shows resulting magnetic forces. (4) Shows electron movement away from the molecule's center. With the molecule held rigid and sufficient force being applied, bond breakage, ionization and molecular destruction could occur.

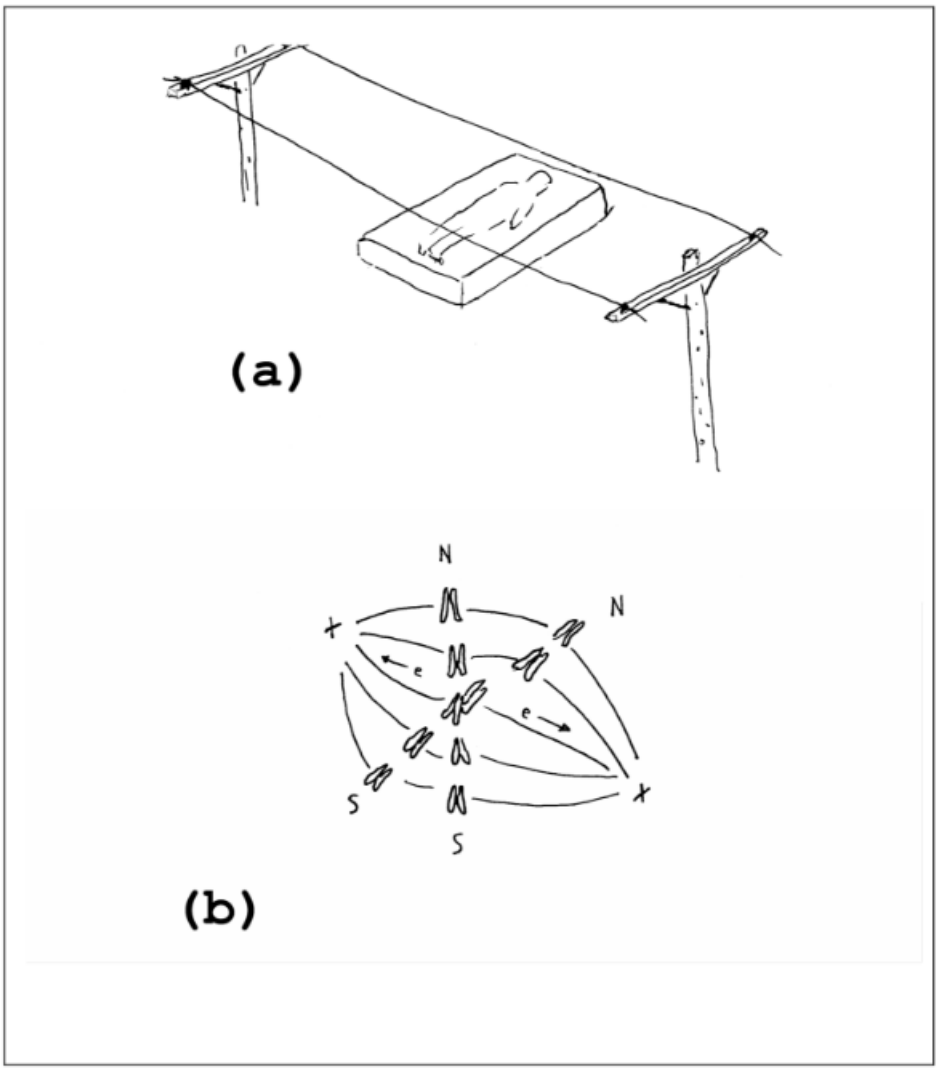

Figure 6.17: Dipoles and Sleeping Patterns; Plate One

A) The body is at maximum risk as the neural dipole is cross-biased by the magnetic field. (B) Natural replicative patterns could be interrupted by the contradictory forces on the chromosomes during cell division.

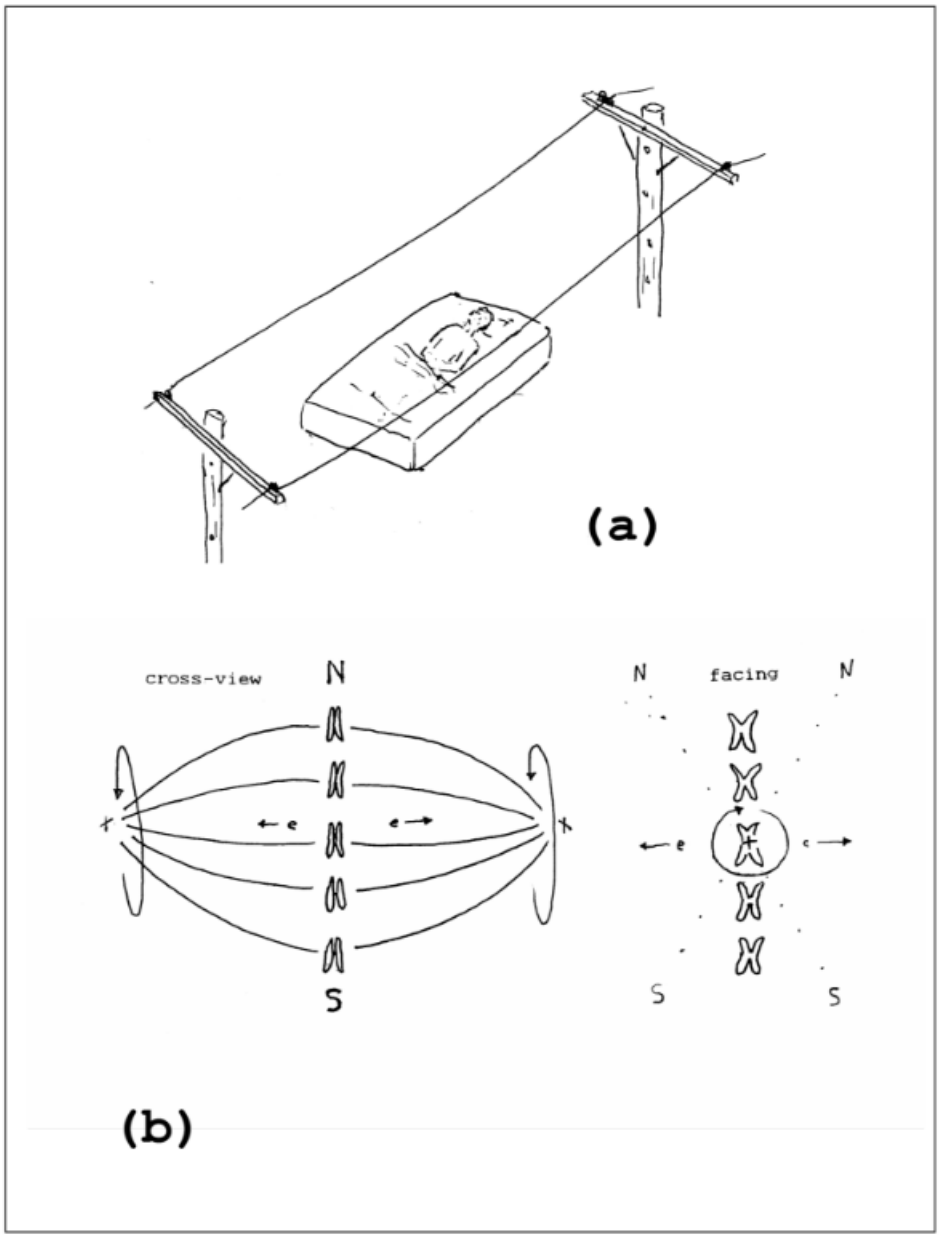

Figure 6.18: Dipoles and Sleeping Patterns; Plate Two

(A) This body is at minimum risk when the body's dipole is aligned with the magnetic field's dipole. (B) Here the dipole fields align correctly with the cell's energetics and the chances of abnormal occurrences would be minimized.

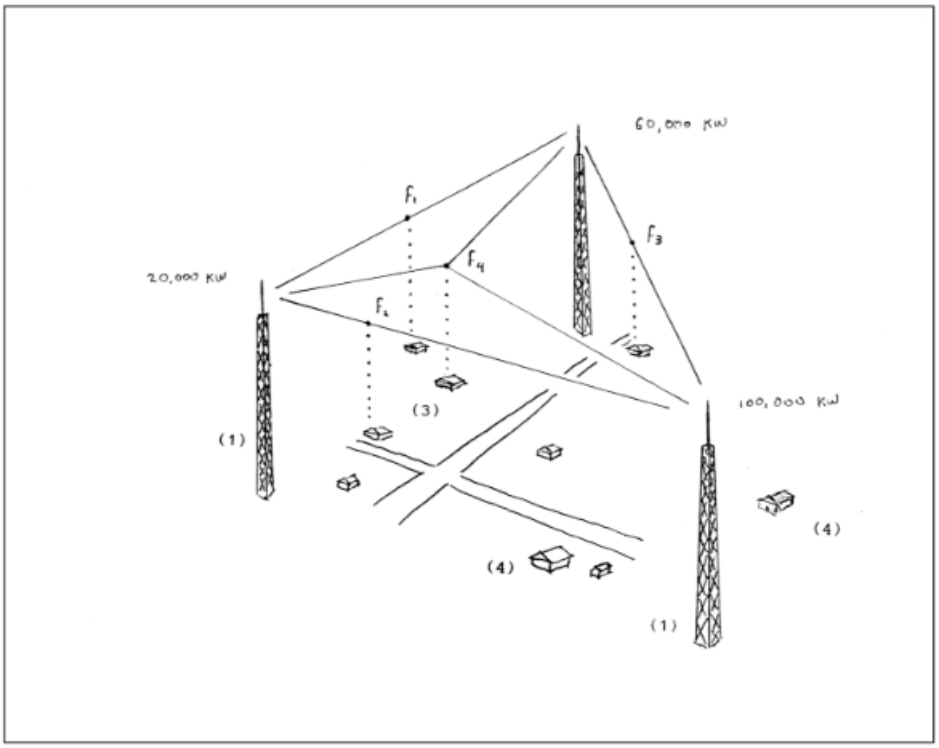

Figure 6.19: Dipole Pockets

There exists pockets in the environment where diploic pressure exists. The effects of prolonged exposure to these areas needs greater study.

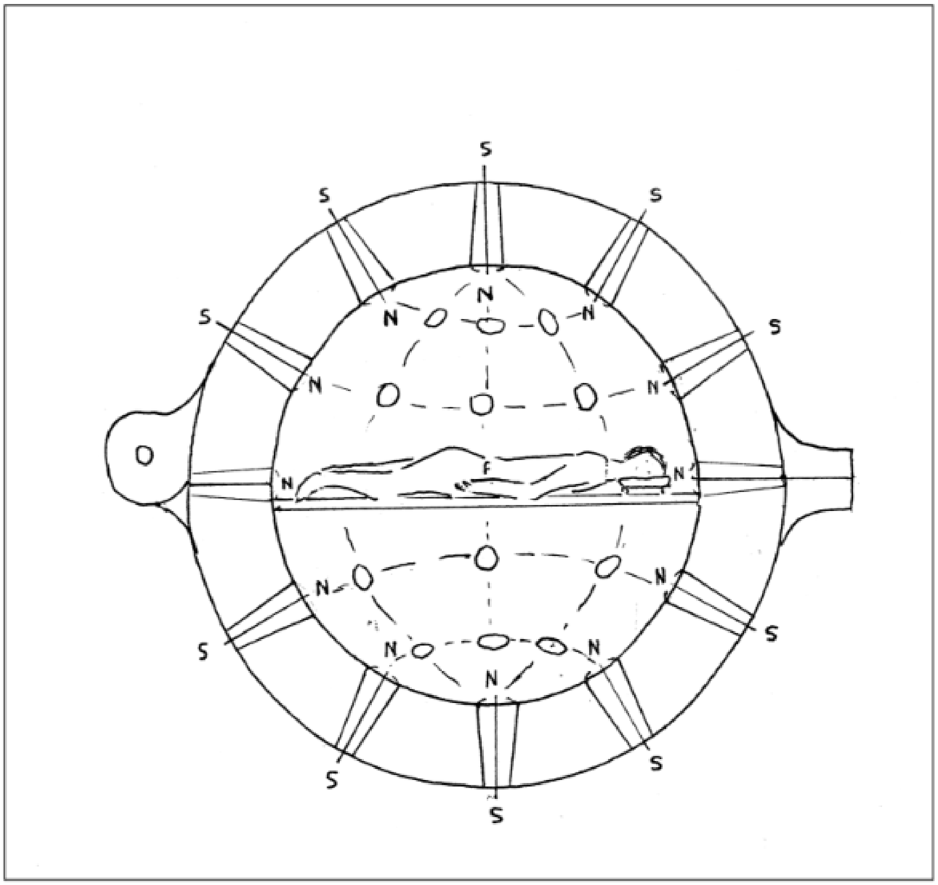

Figure 6.20: Tumor Centered Multi-Pole Ionization

By focussing magnetic pressured onto an abnormal growth, its destruction should occur.

subjecting the patient to converging magnetic fields which are focussed on the growth anomaly will result in the alteration of the metabolism and energetics of the the area. The advantage here is the ionization begins in the focal areas.Further sub-oscillation of the gaussian pattern is an element to be considered in developing treatment protocols. **Fig. 20**

Many growth anomalies like fluid cell carcinomas do not follow specific growth patterns and would be more difficult to expose to ionizing effects of converging magnetic fields. There is no specific target. This can be resolved by instituting a zone of diploidic electromagnetic induction which aligns with naturally occurring neurological patterns. After the desired pattern is established, we can then effect an ionizing therapy which operates like chemother-

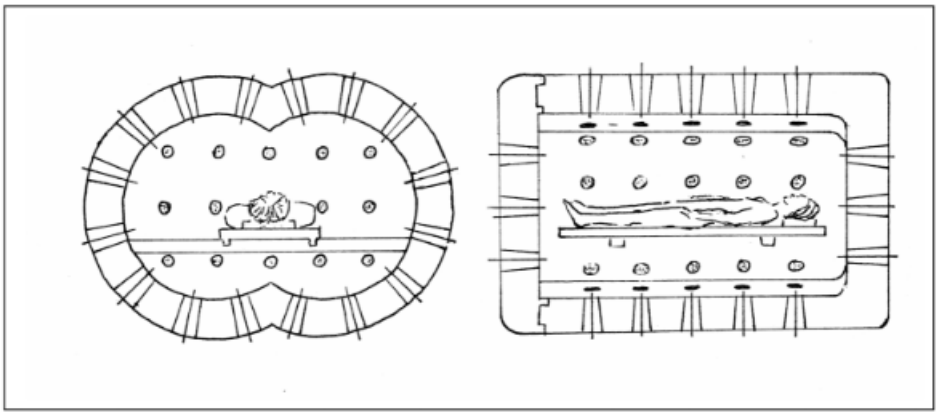

Figure 6.21: A Body Pattern Treatment Chamber

This chamber allows for the creation of longitudinal areas of dipole pressure and would have greater use in treating non-specific or odd shaped areas.

apy to interfere especially with fast reproducing, non-conventional cell growths. The next figure shows the basic setup. Notice how this mechanism allows special emphasis to be placed on left-right definition and longitudinal variance in the radiation pattern. This will give greater versatility in experimentation. **Fig. 21**

The idea of using magnetic fields to treat cell based diseases does not preclude its use to treat injuries. Consider the problem of treating fresh spinal cord injuries. If you place a DC electrical winding device over the patient's injury, and let this device mimic the spinal cord's diploidic magnetic pattern, and then add some AC sub-modulation for mitochondrial stimulation, axon regeneration should be more systematic and straightforward. Similarly, "glial tangle" should be minimized. **Fig. 22,23**

The design of the preliminary medical devices shown here arises from the understanding of molecules as magnetic entities which are capable of mechanical and electrical effects as based on their design. The underlying suggestion is the study of histology should advance from categorizing structural statics to mapping the structure's electrodynamics. We must move toward a more "Maxwellian" understanding of the human design.

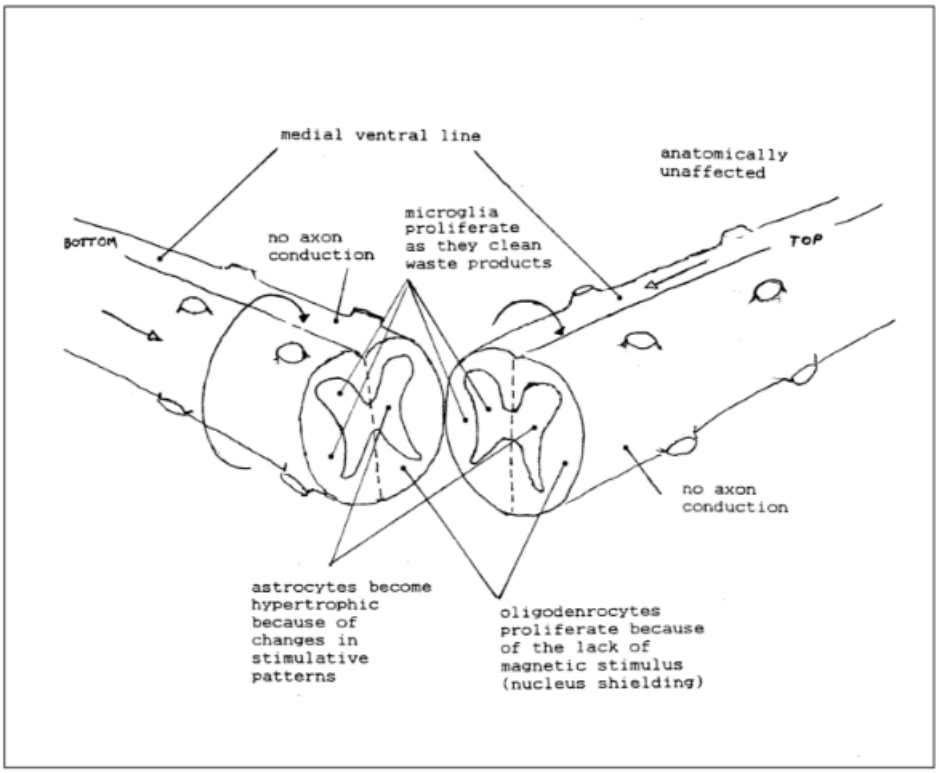

Figure 6.22: Glial Cell Scarring in the Damaged Spinal Cord

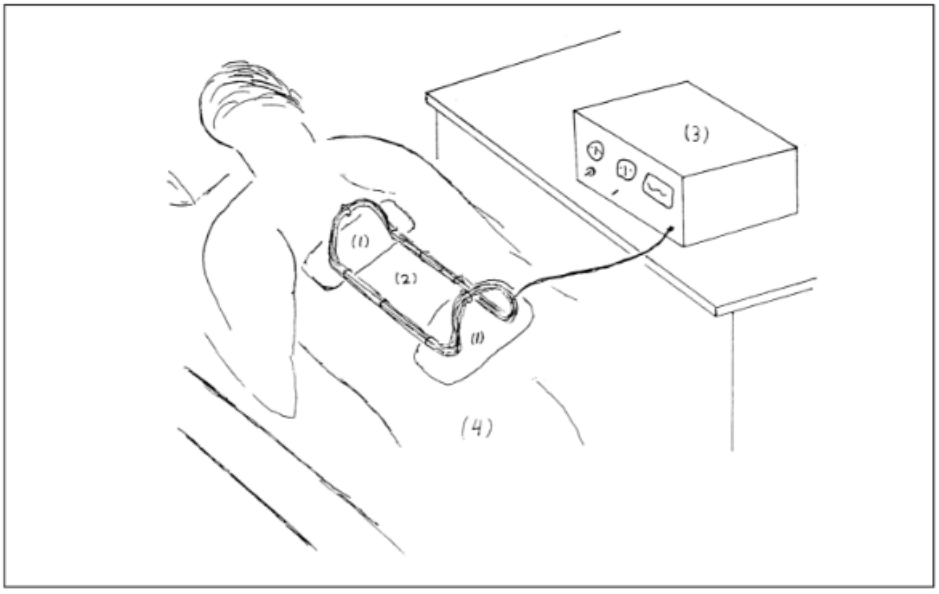

Figure 6.23: Dipole Induction on Spinal Cord Injuries

In this diagram, (1) represents shielding, (2) shows the device's winding patterns, (3) points to the power-pack, and (4) is the patient.
By inducing magnetic patterns which are similar to naturally occurring patterns in intact spinal cords, freshly traumatized spinal cords should heal with less glial tangle, and more orderly axon repair.

Chapter 7

Metabolism and Mitochondria

7.1 Membrane Development

In my general work, I start by establishing an observation as an axiom, and then try to work out its various manifestations. It is like showing the principle of combustion before explaining the mechanics of the piston engine. Now, in the course of my work in biology, the axiom which I played upon was that of electron movement and general effects. In the first instance, the one which concerns DNA conduction, the axiom can be stated thus: The double bonding of the pyrimidine base structures leads to a molecule whose s-electrons can interact with the acid's sugars to cause specific electromagnetic generation activities. The second axiom, this time an axiom which concerns the development of ion conductive pathways and heme vectors, was also made explicit. Now, the third axiom concerns the isolation of electrons in membranes and the availability of these double bond (saturated) electrons for extraneous activities.

Membranes have molecules available in the hydrophobic ends of their constituent molecules, and, secondly, they exhibit an ionic service by being the loci of ionic movements and manipulations. Recall the dependence on coupling/decoupling in the mitochondrion, while concurrently recalling the sodium pump characteristics as the establisher of ionic band behavior, while you consider figure 1.

The axiom of ordered behavior in membrane electronics can be

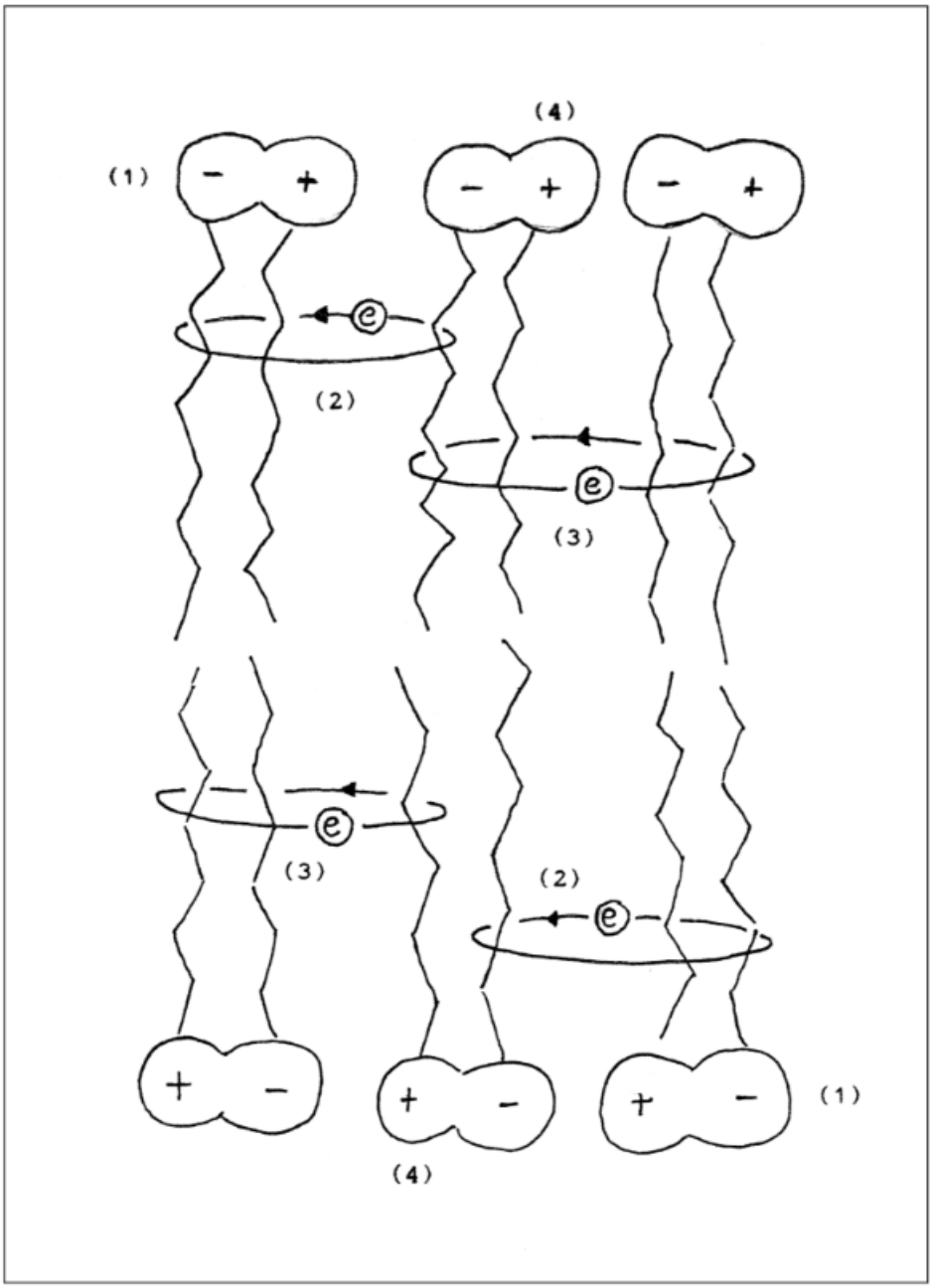

Figure 7.1: Ordered Behavior In Membrane Electronics

(1) The dipolar charge of the water soluble portions of the membrane molecules acts as an insulator.
(2) Internal s-electrons form a "seabed" of moving electrical charge.
(3) These electrons follow a plane perpendicular to their origin.
(4) Depending on the forces acting on the membrane, the molecules themselves can be compressed or expanded. The electrons can oscillate, flow, dissipate, or condense.

applied to many instances of membrane formation where there are conduction of ions, and hence, where the lengths and shapes of the membranes and their electron beds follow the electrical movements of ion pathways. There appears to be a delicate symbiotic relationship based on energy forces. Here we find a clue to formalizing the mechanics behind membrane existence.

Rule one : A membrane is an electrical field created by the collision of two autonomously operating energy systems.

Rule two : The membrane is influenced predominately by the magnetics which are heterogeneously transmitted by moving or electrically excited particles.

Rule three : An membrane is not only influenced by larger morphological developments, it is also open to smaller scale influences which may be considered hormonal.
Clearly then, the electronic membrane has many subtle properties. To clarify these three rules, consider figure 2.

While we have looked at a variety of energy systems which constitute the cell, we need to formalize what is already known into a larger conceptual framework. Notice in the following diagram how the study of the physics of membranes gives us a clearer idea of the nature of the physical forces and chemical machinery at work in the cell. There are three energy systems at play. The first is the DNA system, the second is the interstitial systems representative of the dipole and heme vectors, and the third is the central cytoplasmic mitochondrial system. These energy systems are colliding with one another at the membrane level. **Fig. 7.3**

7.2 Mitochondrial Energetics

In our study of the cell, we have so far looked in depth at the DNA's electrical conduction energy system and at the interstitial dipole energy systems. A closer look at the cytoplasmic energy system is now required. A clue to this energy system is found by studying the liver. Why does the mitochondria of the hepatocyte have the exact same hexagonal shape as the larger anatomical organizations (lobules) in the liver itself? Why does a hepatocyte rapidly undergo mitochondria alterations (normally the rapid loss of cytochrome P-450 mediated metabolism) when used for experimentation in vitro? The best answer to these two questions would begin with experiments which study metabolic function within dipole electromagnetic fields. We can infer however the exterior and interior energy

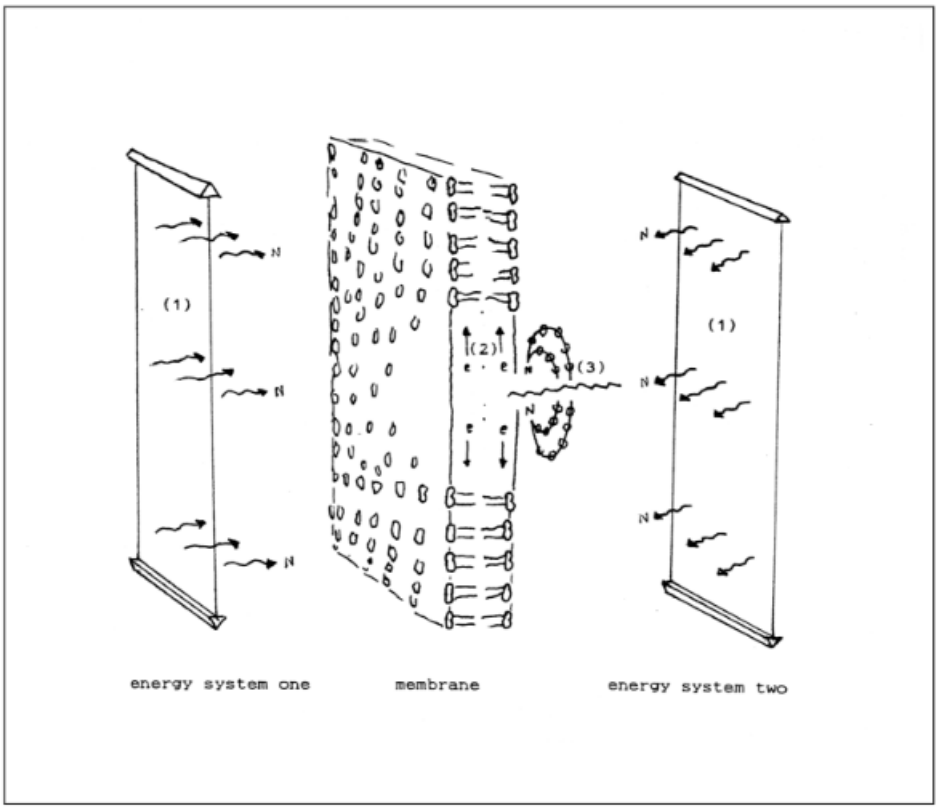

Figure 7.2: The Electronics of Energy Collision in Cell Membranes

(1) Larger energy systems control the alignment and shape of the membrane.
(2) Membrane reaction to a hormonally induced dipole.
(1)+(2) The effectiveness of the hormonally induced dipole depends on the shape and strength of the larger energy system.
(3) An electro-phobic molecule passes through the electron evacuated area.

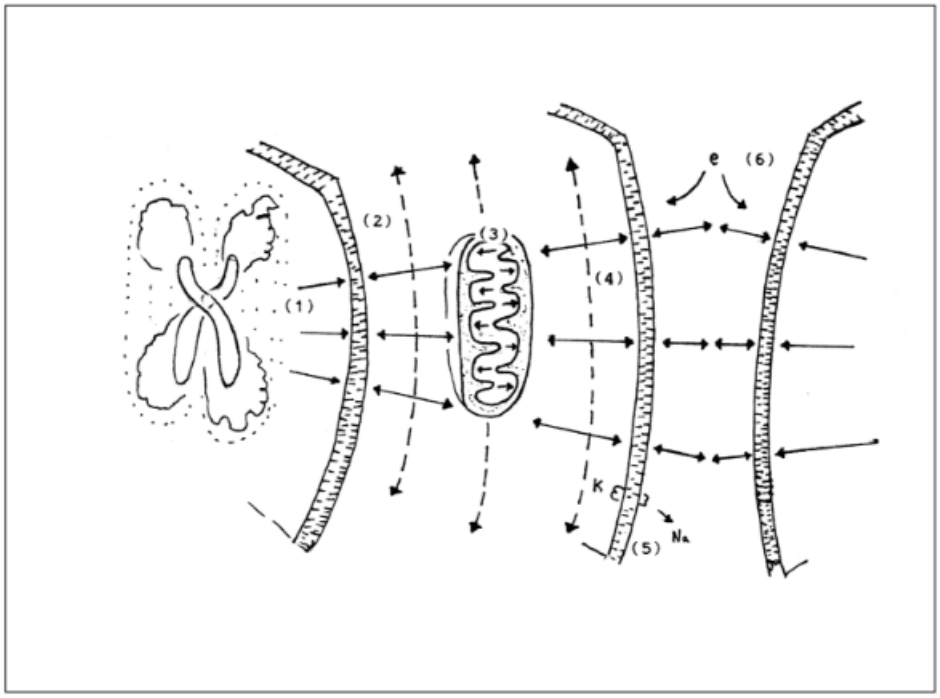

Figure 7.3: Energy Influences on Cell Membranes

(1) DNA centered electromotive activity
(2) RNA-protein related electromotive forces
(3) Mitochondria electron and molecule transport systems (4) Lipid based metabolism.
(5) The "sodium pump" becomes a necessity of the cell medium to maintain the viability and shape of the cell under different interstitial forces.
(6) Interstitial space shows an electron stress zone which leads to arterial, venous, lymphatic and ductile differentiation.

influences on the cytoplasm cause a situation where the geometry of those two areas are reinforced.

The following diagram series shows my present understanding of the aerobic activities of the mitochondria. I am attempting to relate machine and physics concepts to coupling/decoupling, self assembly, and cytoplasmic orientation of the organelle. Ideally, we need to find the mechanical basis for in vivo manipulation of the aerobic process. In the mitochondria, we must recognize how all the structural variance which occurs in coupling, such as the ejection of water molecules, the building of a cationic charge, the transportation of electrons, are electromagnetic actions, to whom a electromotive reaction should subscribe. This reaction may be the spinning of the organelle when in the coupled state. The spinning becomes the keying mechanism for electron transport in the system. Furthermore, it interacts with the basal magnetic patterns, as determined by the ion conductive fields, and this elicits both a cationic charge, and a regeneration of the magnetic field which induced the operating mode. When not in this coupled mode, the spinning action of the organelle is lessened or stopped, and there is no reaction sequence per se. In line with the surrounding magnetic field, the organelle then becomes a quiet state organization which is capable of searching out hemodynamic influences while allowing decoupled glycolysis to occur. The variance between the coupling and decoupling amounts to a switch to preserve the cell's viability.

Mitochondria's shape shows it has a predisposition to assemble according to environmental magnetic and electrical patterns. Alterations, e.g., oscillations in intensity of these geometric patterns appears to lead to variations in the rates at which respiration activity can proceed. An increase in the intensity appears to speed respiration whereas an decrease in intensity decreases respiration. This oscillation activity in turn causes the stimulation of mitochondrial DNA in such a manner as to evoke RNA synthesis. The quality, as in type, of the synthetic activity is controlled by both the geometry and the intensity of these oscillations. The cessation of oscillations, likely driven by the filling of the cytoplasm with molecules which absorb energy, leads to a condition where, firstly, a steady gaussian state is influential, where, secondly, respiration activities are not hindered by outside forces, and where, thirdly, mitochondrial DNA replication is allowed to occur.

In mitochondria behavior in ovum and sperm, we must recog-

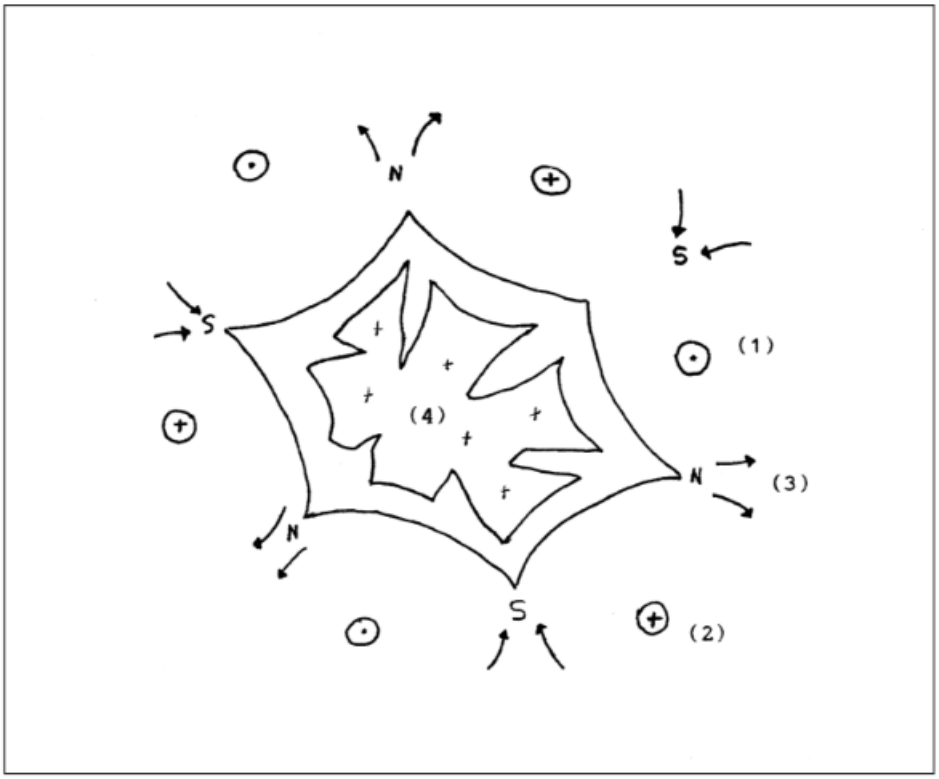

Figure 7.4: Dipole Patterns In A Six Sided Mitochondria

KEY:
(1) Signature for an ascending electrical force.
(2) Signature for a descending electrical force.
(3) Resulting electromagnetic forces.
(4) A state of high decoupling as induced by strong intra and extra cellular electromagnetic forces.
Explanation: Hepatocyte mitochondria and liver lobules share the same multi-pole dipolar shape.

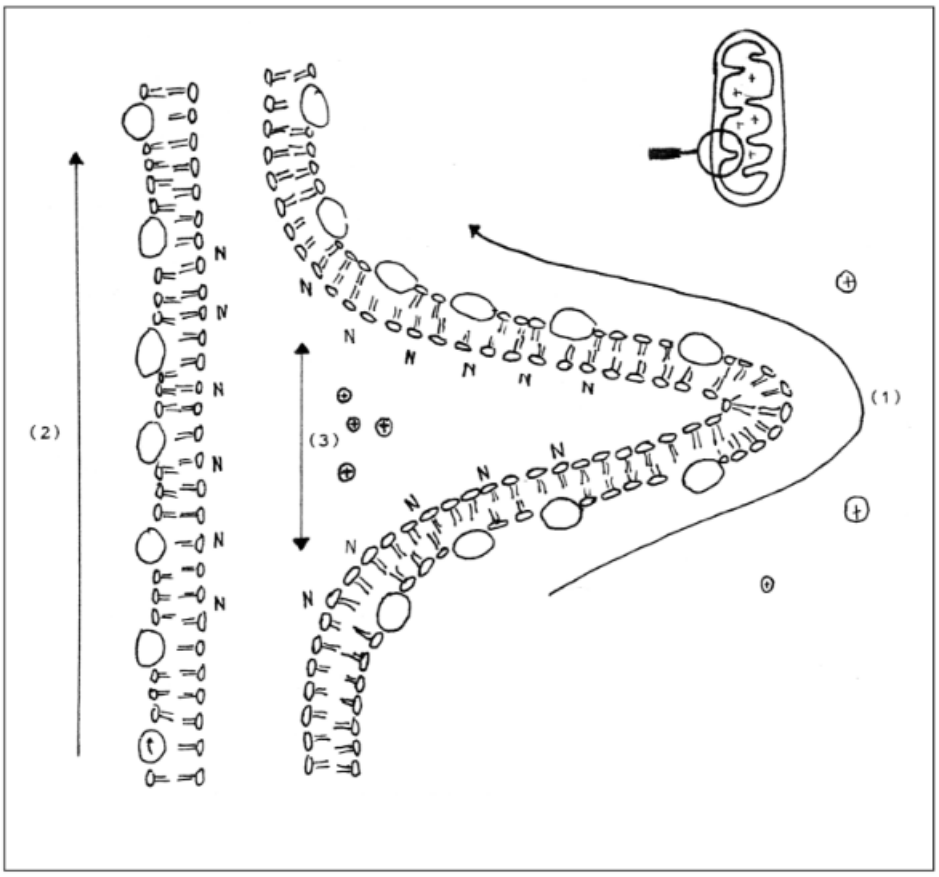

Figure 7.5: The Energetics Of Coupled Mitochondria

(1) Inner membrane and reaction sequence, (2) Outer membrane and reaction sequence, (3) The resulting electro-phobic environment leads to cation engulfment.
Explanation: As a reaction sequence occurs, the s-electrons of the membrane move sympathetically, and this sympathetic movement sets the prerequisite for cationic engulfment. Larger cations tend towards the center of the organelle, and smaller cations, such as protons, prefer the intracisternal space. Water molecules are ejected from the charged areas.

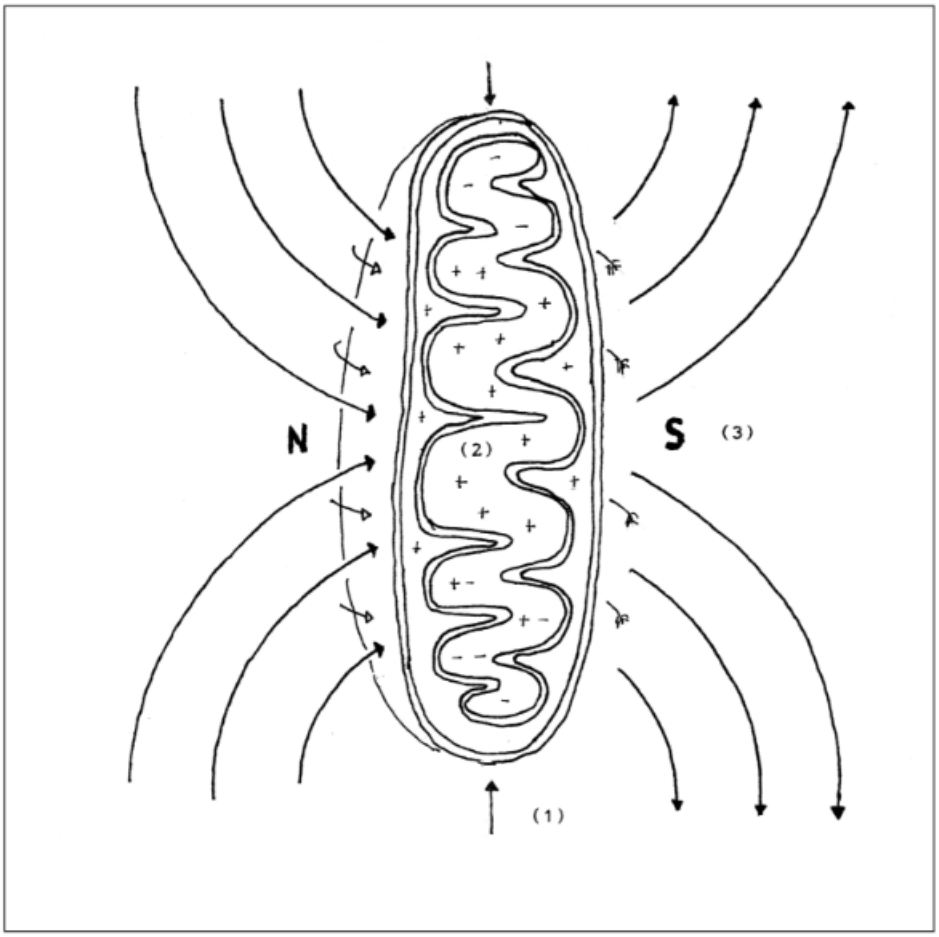

Figure 7.6: Additive Polarity In The Pancreas Mitochondria

(1) Electromagnetic forces from the ion conductive pathways mediate assembly and subsequent membrane structure of the pancreatic mitochondria. Axial spin may control assembly.
(2) The resulting cylindric shaped structure can reinforce, through respiration, similar dipole magnetic patterns. Spin may be the switch which determines the degree of coupling.
(3) This induction patterns leads to the reinforcement of the ion conductive process. This occurs through magnetic sympathetic alignment.

nize remarkably different conditions exist. Therein, the chromosomes, now being haploid, are more radiographic in nature, and this alters the energetics to which the mitochondria's energetics must subscribe. Moreover, the interstitial spaces are, in this situation, non-influential, and so the haploid chromosomes are the chief vehicle in controlling mitochondrial activity. The influence of their electromagnetic fields are radiographic from the nucleus with the lines of gauss thus permeating. The aerobic supplies are poor, if not nonexistent, in both cases. Furthermore, the sperm, perhaps because of differentiation in a cooler, more hostile environment, has become a smaller structure. In the ovum, the opposite conditions prevail and the cell grows larger. With this influencing differentiation, the resulting shape of the mitochondria in the spermatozoa is, firstly, circular, because of the center radiation of magnetic energy, and secondly, elongated, as this structure is subject to the second dimensional component of the radiographic feature. A energy pattern exists where the decoupled metabolic pathway exerts an influence on the chromatic energetics and viceversa. The ovum itself appears to escape this influence, as its environment is more hospitable. **Fig. 7**

One of the main difficulties in understanding how physiological applications of electromagnetic energy can be used progressively to treat organ related disease is the exceptionally complex relationships which exist between the electromagnetic intensification of blood iron and the general ion conduction fields. The iron heme vector influences work as a local adjuvant whereas the ion dipoles act as the ion dispersal mechanism. Together, in a time-line of signal processing, they cause organ differentiation, and henceforth, with the success of this treatise, can cause alterations within context of that differentiation. The problems of organ stimulation can be divided into two sections, the first being the geometry of the stimulation, and the second being the nature, as in type, of the stimulation. The solution to the first problem, the geometry of stimulation, revolves around finding anatomical and/or mitochondria patterns which can be expressly shown to be the result of a definitive physical occurrence. The second problem, the understanding of the nature of a stimulation procedure, is ideally dealt with through the empirical application of the abstract atlas equation mathematics.

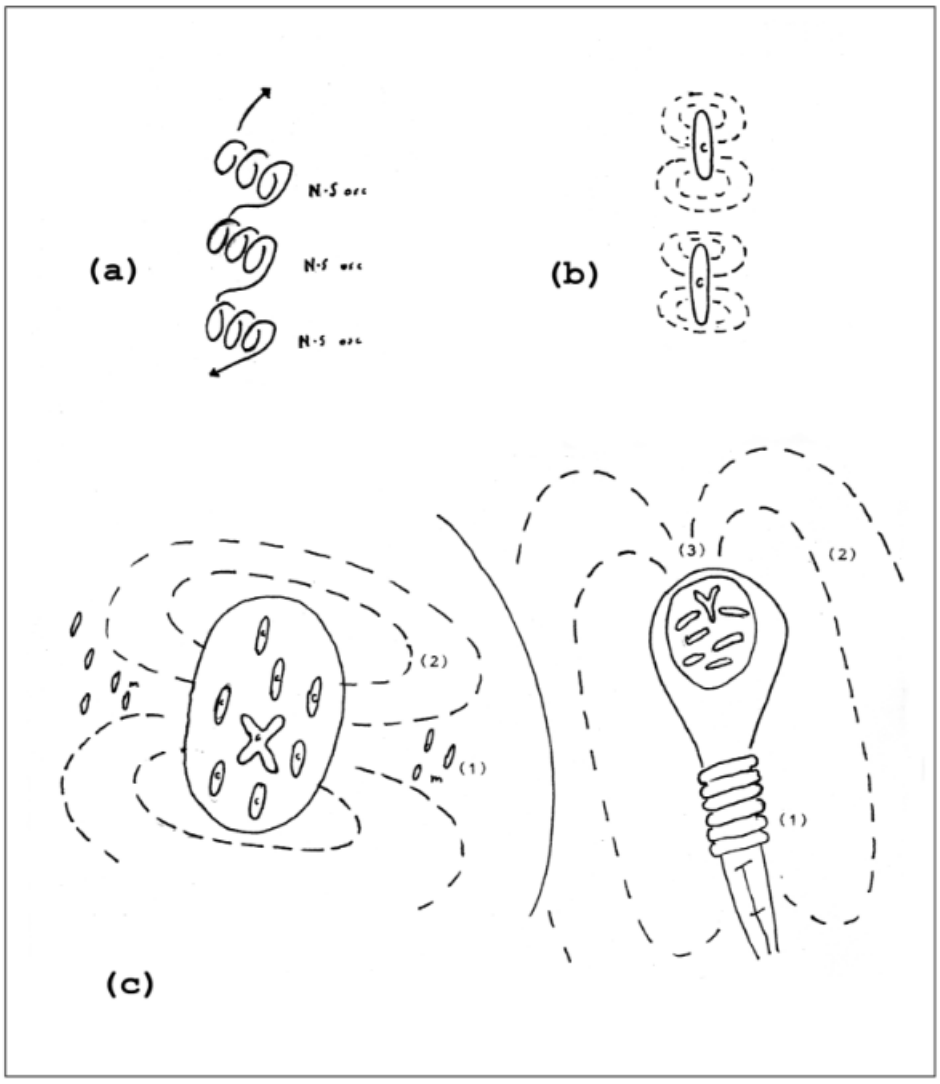

Figure 7.7: Decoupled Glycolysis In Haploid Chromosomes

Key: a) Winding detail of the DNA/chromosone, b) The resulting haploid energetics are radiographic, c) Environmental response of the ovum's and sperm's haploid chromosomes to an interstitially non-magnetic environment.
Explanation: (1) The mitochondria's energetics and differentiation is affected by the haploid chromosome/DNA. These forces are distinct from the forces diploid chromosomes exert. Further, there is no interstitial component to cell stimulation.
(2) To fertilize, there exists a process of energy alignment.
3) The temperature differential predominates in the peculiarity of this morphogenetic development. The cold environment favors glycolysis in sperm cells.

7.3 A Mathematical Analysis Of Cell Structure

In studying the cell's three energy systems, the atlas equation is a stepping stone. It represents a ternary mathematical model of the cell and it points toward the variables involved in the three energy systems. It further shows which forces tend to dominate in each of the three energy systems. For example, the DNA/chromosome tends to magnetic effects and influences, the cytoplasm tends towards ionic charge influences, and the interstitial spaces are more dual product energy based systems.

Complicating equation interpretation is how the atlas equation is breakable into two potential energy equations. The relationships between these two equations are what determine the degree of coupling and decoupling in the energetics of the cell. In the following diagrams, the coupling curves are efficiency curves in power transfer theorem. For example, when two subordinate energy systems have matched resistance, (or counterpoised inductance and capacitance) maximum power transfer can occur. The cell has three separate power transfer curves at work. Complicating this further is how the variables of each equation subset have different dimension-space bounding and this affect both their quantification and their relationship with one another. For example, the $H = XD^2$ equation is seen as being oscillated by or oscillates the interstitial effects, the $P = DU^2$ equations absorbs or utilizes the interstitial effects, and the interstitial equation, $T = UI^2$, divides itself into energy utilization phenomena, one of which specifically T, time, may be seen as hormonal, whereas the other, U, mitosis, may be seen as heme related.

Now, returning to our quanta discussion, I would like to introduce the concept of parallelism into our kit of interpretational tools. The geometric inferences of the dominance of the oscillator of an oscillating equation, as in the dominance of the $L = RV^2$ equation of the whole chemical equation, when acted on by the physical science equation to elicit life lead us to thinking about DNA energetics. This expands, firstly, into a specific part of the life science equation, the $H = XD^2$ oscillated equation, and, secondly, into the oscillator of the absorbtion-repulsion physical equation, specifically $Y = \phi N^2$. These clues are how I originally derived the concept of DNA conductivity. A third aspect of the complexity of this argument is how the atlas equation shows biology is the end product of

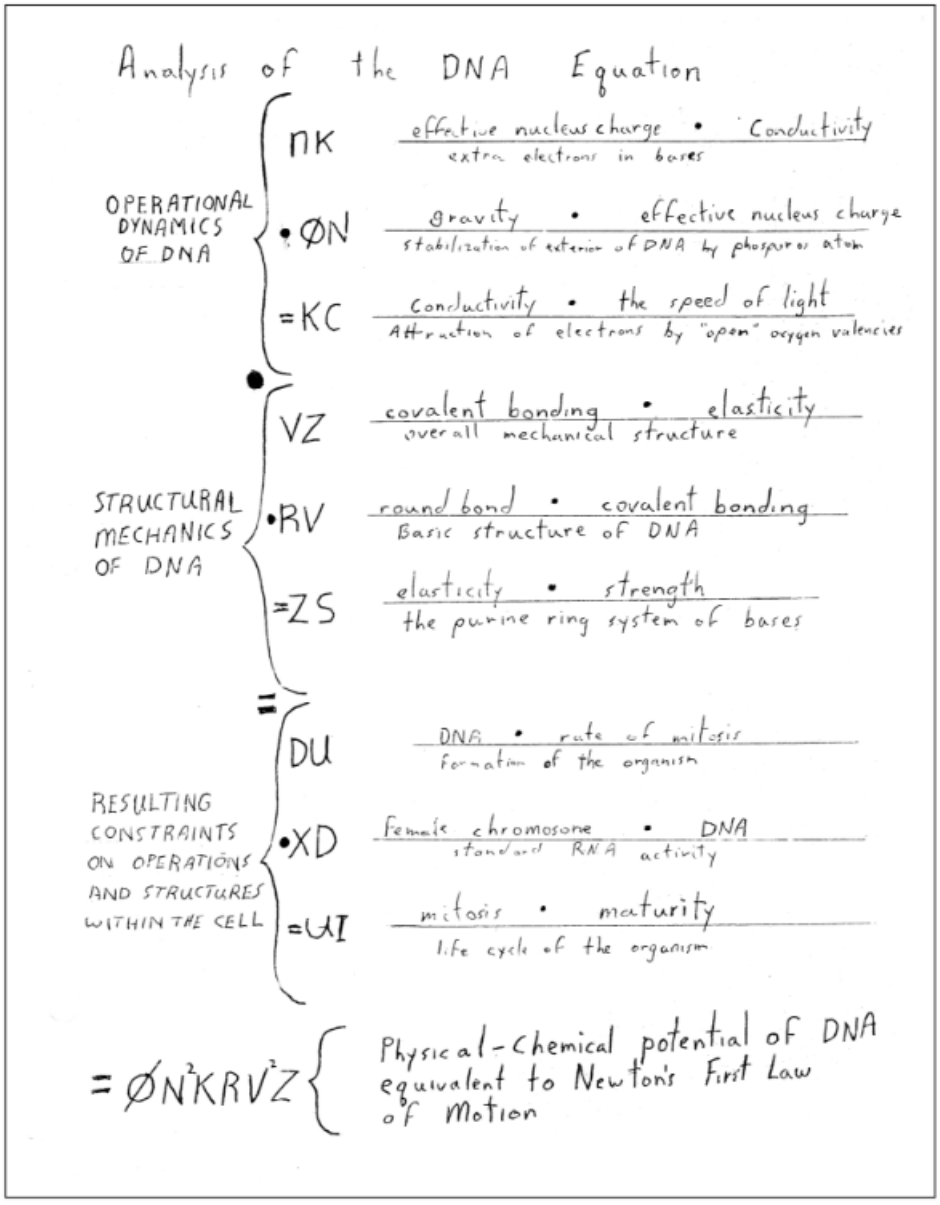

Figure 7.8: Early Analysis of the DNA Equation (1985)

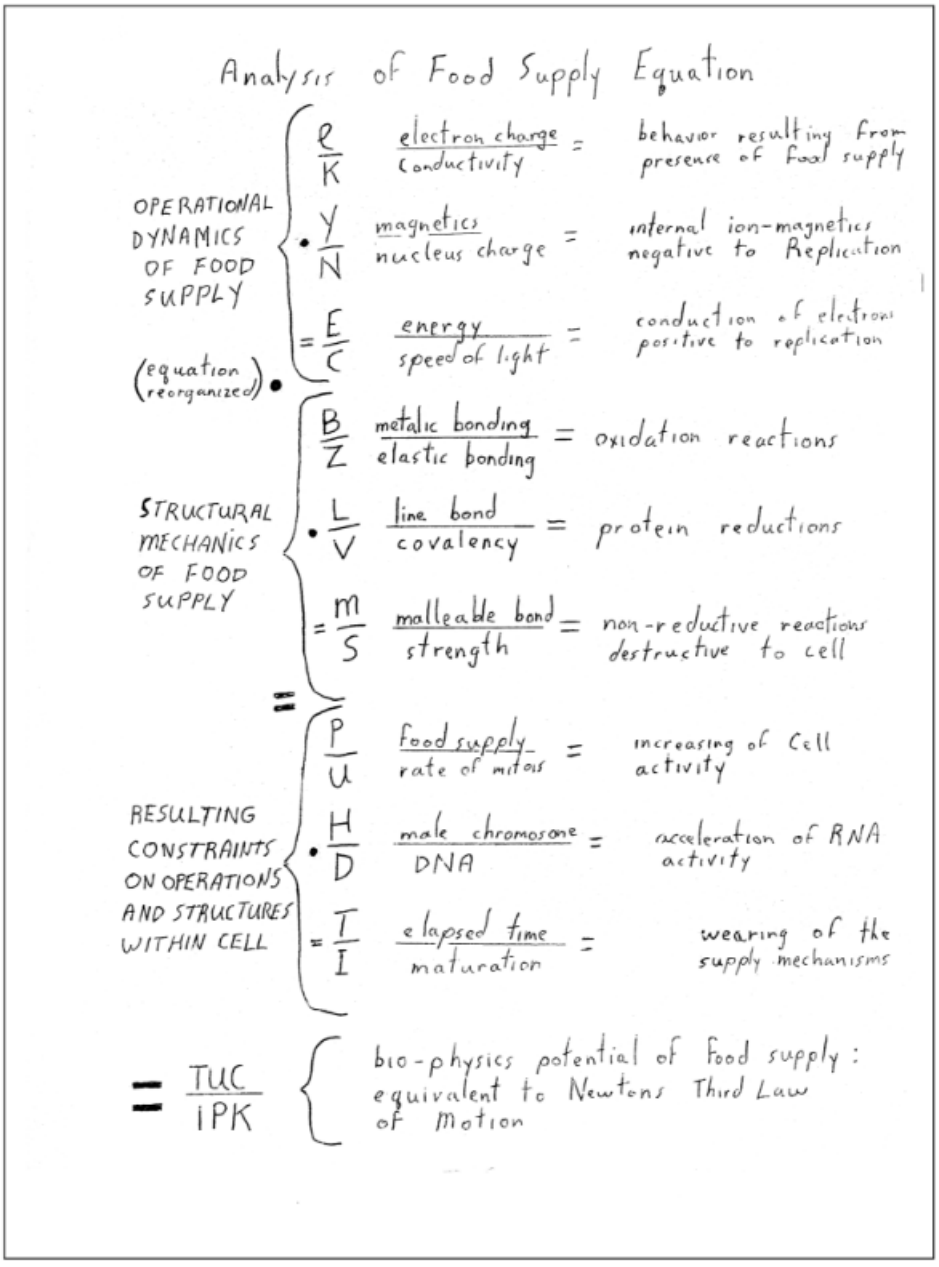

Figure 7.9: Early Analysis of the Food Supply Equation (1985)

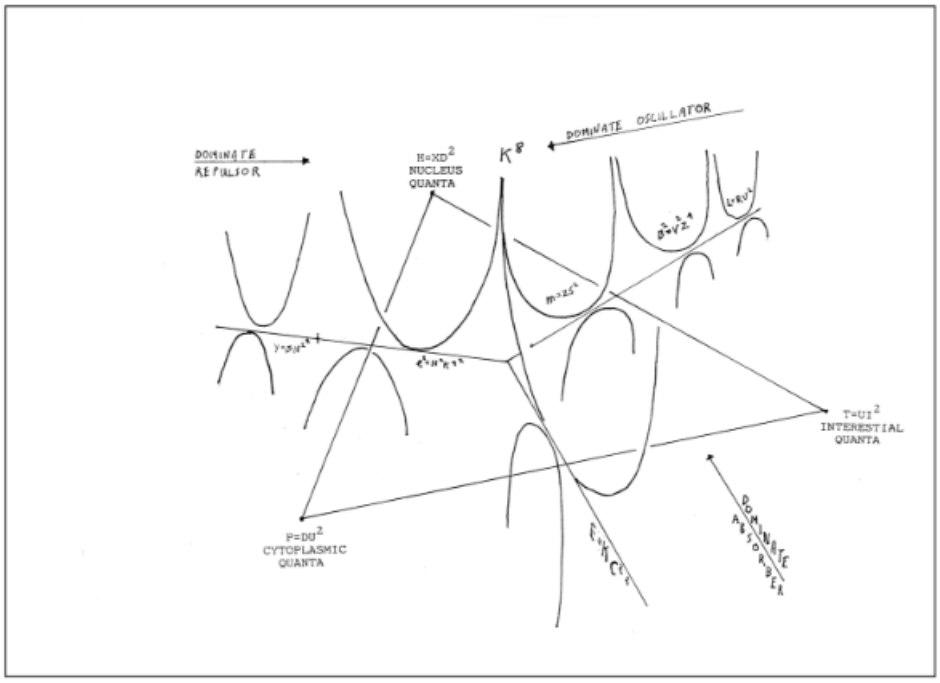

Figure 7.10: Overlay One: Equation Geometry At Maximum Coupling

physic's action on chemistry. Of these two multiplicands, chemistry and physics, we find in the philosophy physics to be the primary variable, with the chemical equation being dependent on it. Furthermore, in overall function, chemistry is the oscillated quanta, whereas the physics becomes the displacement quanta. Because of the physics equation's positioning, the chemical equation's desire for phenomenal entropy is not allowed to occur. This sets the stage for biological formation. The following shows the basic schema for understanding both the parallel quanta and the functions of the cell. **Fig. 10-12**

One item of note is how biological development and periodical table growth share a common attribute. In both cases a destabilization occurs in the growth process. In the periodic table it is the growth of the semi-stable inner transition elements (Lanthanides and Actinides), and in biological development, it is the hormonal destabilization of adolescence and then aging. Is it coincidence or mathematical structure which dictates this pattern?

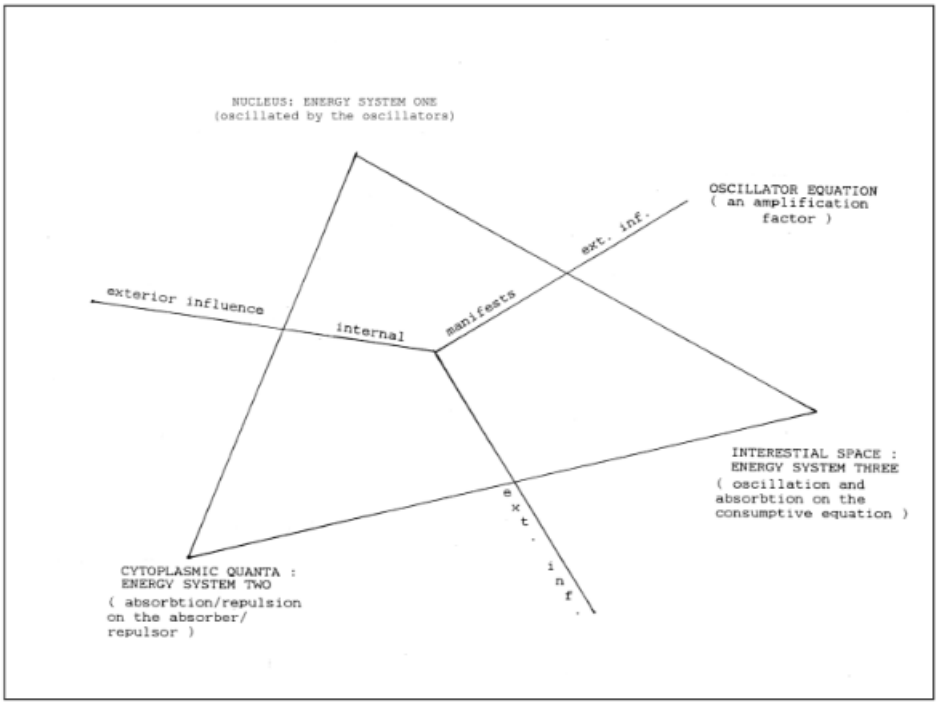

Figure 7.11: Overlay Two: Parallel Quanta and Influential Equations

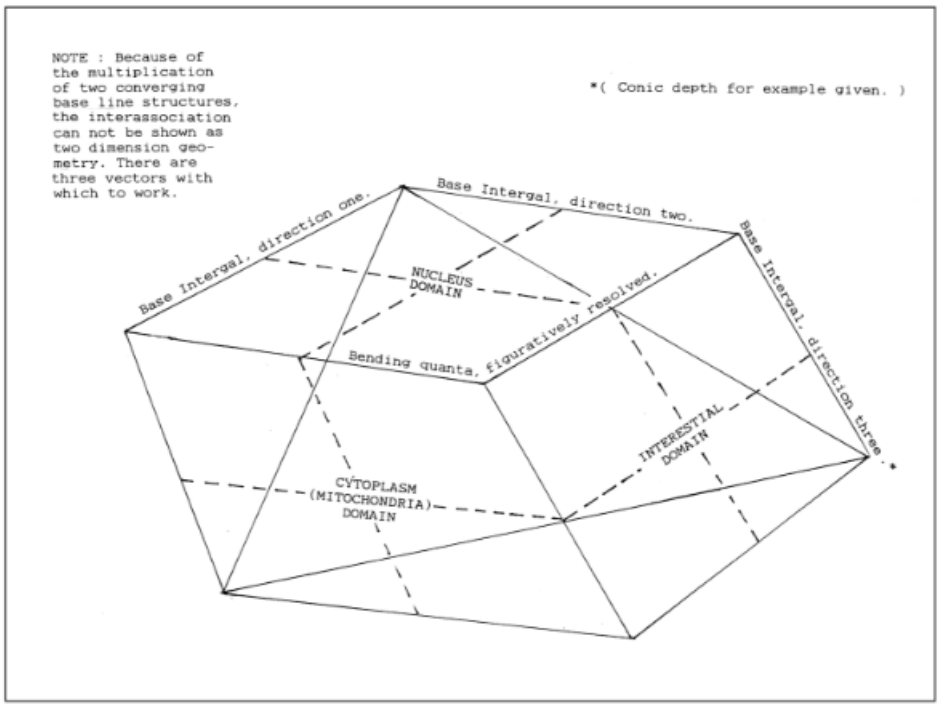

Figure 7.12: Overlay Three: Area Domains in Cell Function

7.4 Metabolic Control Using Induction

My research has exposed specific techniques which may be of use in experimental treatments. My first interest is in the stimulation of mitochondria function through the blanket stimulation of the entire cell. I wish to make the entire cell more metabolically active. Technically, the key to accomplishing this is to repair abnormal patterns in physiological electromagnetic structure which may have occurred in the life of the cell. For example, liver cells may develop a weak enzymatic system because of subtle alterations in the magnetic patterns which help drive RNA synthesis. Hence, blanket stimulation patterns which take advantage of the analogical manifestations of cellular membrane patterns, as in the shared symmetry between mitochondria, cell globules, and the histological patterns can be used. This amounts to the application of electromagnetic fields which fortify the energetics seen in cell differentiation. One target of focus here is the mitochondria. The mitochondria is the central energy system, and so the stimulus should be sympathetic to its geometric and frequency requirements. In some ways what we are trying to do resembles how a sterol works as a secondary messenger by causing local intensification of the cell's energy system. **Fig. 13**

The following diagrams depicts the vectors of the stimulus and alteration of the liver organ. Remember, despite the predominance of the mitochondria, we are stimulating the entire cell here. DNA is producing the desired RNA strands, respiration is increased, and the interstitial behaviors are intensified. Other than the general geometries inferred from descending pathways and quanta discussions, exact frequencies and gaussian intensity rates are not known. **Fig. 14,15**

The stimulation of magnetic patterns can be accomplished externally through use of the ionization-deionization machine system shown previously in this book. Why is magnetic stimulation the right direction? We are heading toward the stimulation of the cell's DNA to allow the cell itself to fix the medical problems which have occurred. This technique might be helpful in protecting, through immunological shielding, a transplanted organ. Furthermore, the differences between cells, while manifested chemically, are essentially physical. Accordingly, it seems reasonable to say if the physical environment is modified early, the physical development during subsequent mitotic divisions will lead to the differentiation of a new cell lines without necessarily using stem cells. One should note scar

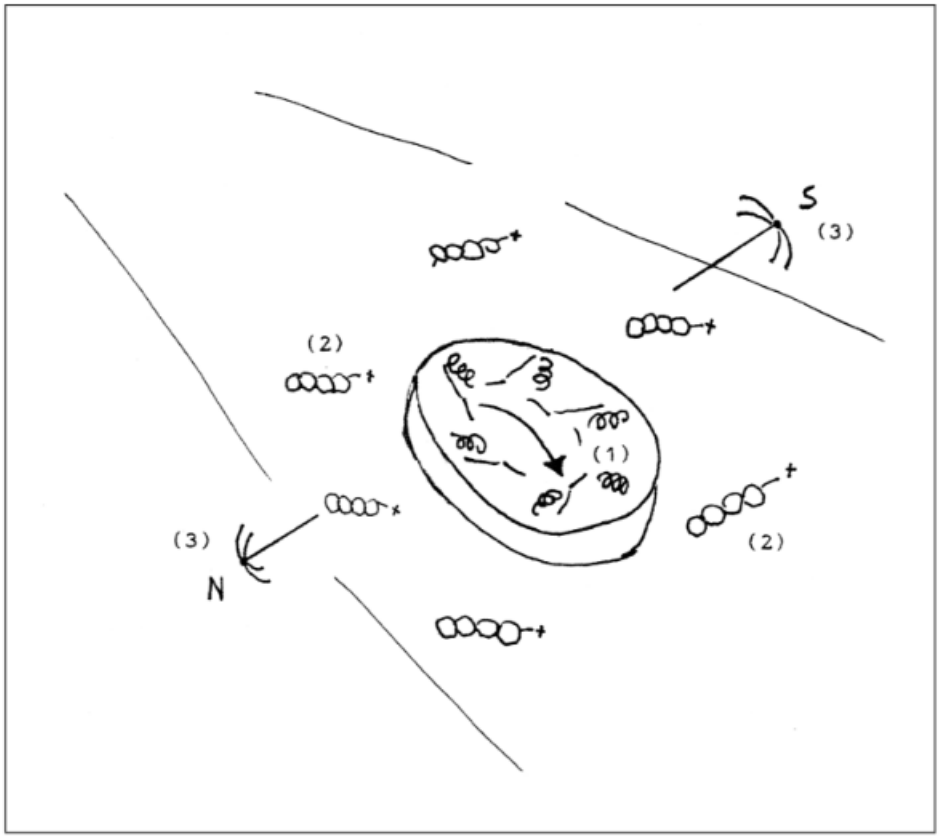

Figure 7.13: Magnetic Intensification by Sterols

(1) Enzyme and internal windings
(2) Sterols partially imbedded in the membrane layer
(3) The environmental charge inflicted by the sterols is such that it increases reaction rates. It appears the magnetic charge exuded by s-orbital rotations in the saturated and unsaturated rings of sterols will leads to a sidelong intensification of the magnetic parameters which already exist. (S-orbital rotation in a model of the sterol molecule shows it has magnetic polar properties. These properties can amplify larger physiological influences.)

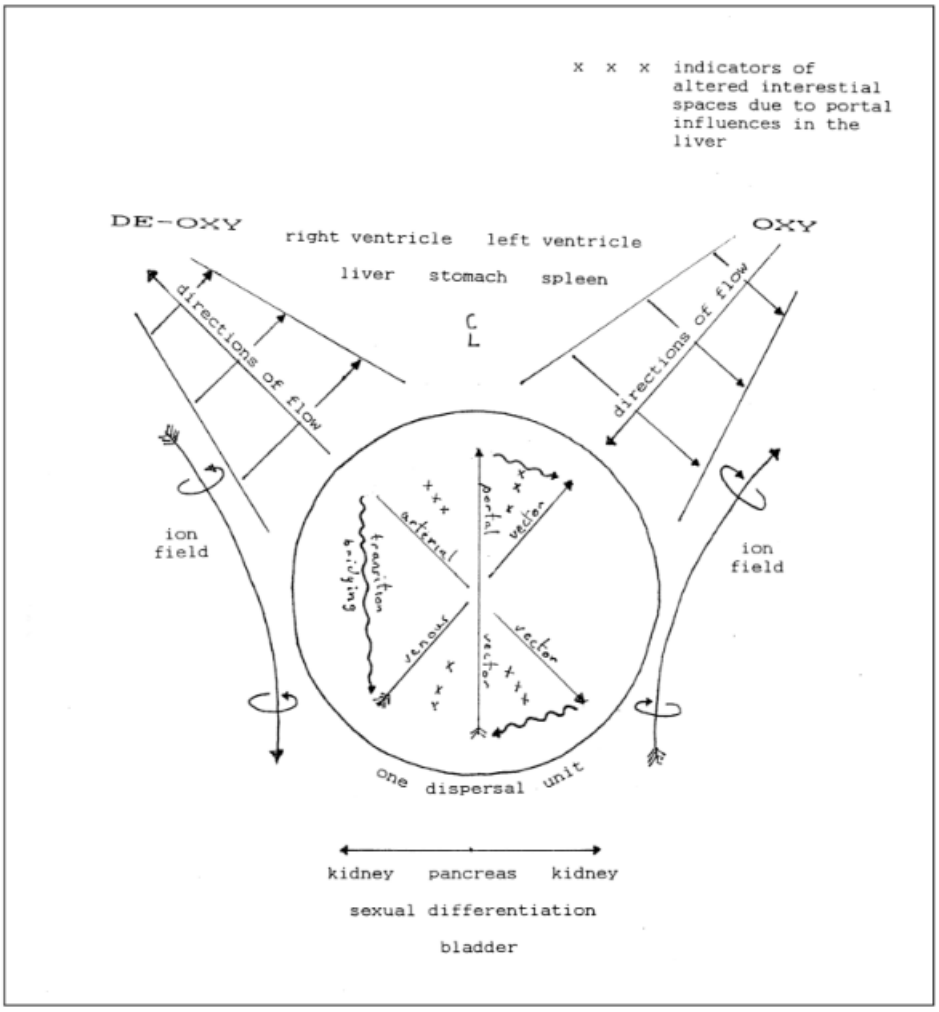

Figure 7.14: Vectors of Chromatic Stimulation in Liver Cell Differentiation, Plate A

Oxy, semi-oxy, and de-oxy heme vector behavior in the physiological area of the liver.

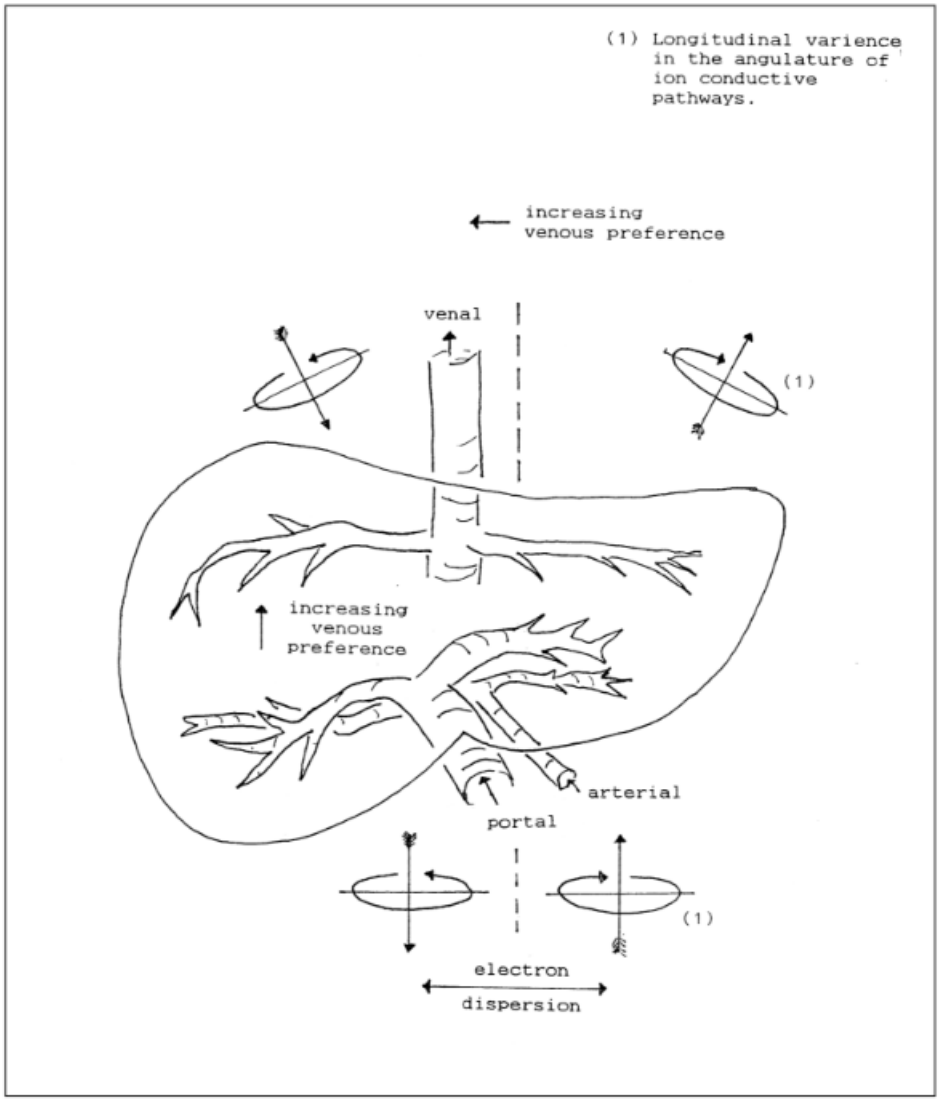

Figure 7.15: Vectors of Chromatic Stimulation in Liver Cell Differentiation, Plate B

Physiological manifestations of ion conductive pathways and the heme vector in the liver area.

tissue will be the enemy of this process. **Fig. 16**

In terms of the best approach to making use of differentiation and mitochondrial theory in medicine, I am apprehensive to say whether the technique of extra body stimulus will predominate on the technique of internal electrical appendages. Electrical appendages are very invasive. It probably depends on the success of extra body stimulus and on the duration of treatments needed to cause the desired result. I have no data available here to help the experimenter.

Now, while the two techniques presented above are very prefunctionary, the very speculative technique to be considered next will invariably require their assistance. The technique concerns a strategy whereby genetic disease can be approached through viral seeding. I want to deposit deficient genes in the body through a viral host. The modified virus can then deliver the dna sequences which are needed. The cytoplasmic proliferation of the resulting genome, if properly done, may then alleviate the organic defect. Key in this is understanding the physics of self-assembly in the virus. As shown, the virus requires a specific energy field structure to be available to allow the self assembly. This also plays a role in targeting. It may be possible, at some time in the future, to encapsulate genetic material in a sterile virus and then deliver it to the required area. But finding the right viral structure, finding the process required to assemble it in lab, and then refining the targeting process to deliver it to the right area of the body would not be easy. **Fig. 17,18**

One further problem with the sterile virus technique is the immune system. Should the implanted gene, or its viral carrier, be so antigenic that it forces the cell to stick out as an anomaly, then the immune system, with its electromagnetic sensitivity, would destroy it. However, by the minimization of the genome's size to only that necessary for the production of the desired protein, by the exclusion of the genetic material necessary for the reproduction of the virus self assembly units, then no negative immune response should result. Furthering this logic, the overall sensitivity of the deposited DNA to its "growth" environment may be lessened or increased by either lessening or increasing the overall number of duplicate genomes in each strand, or by application of secondary stimulation. Next we will look at the immune system to try to understand some aspects of the mechanism.

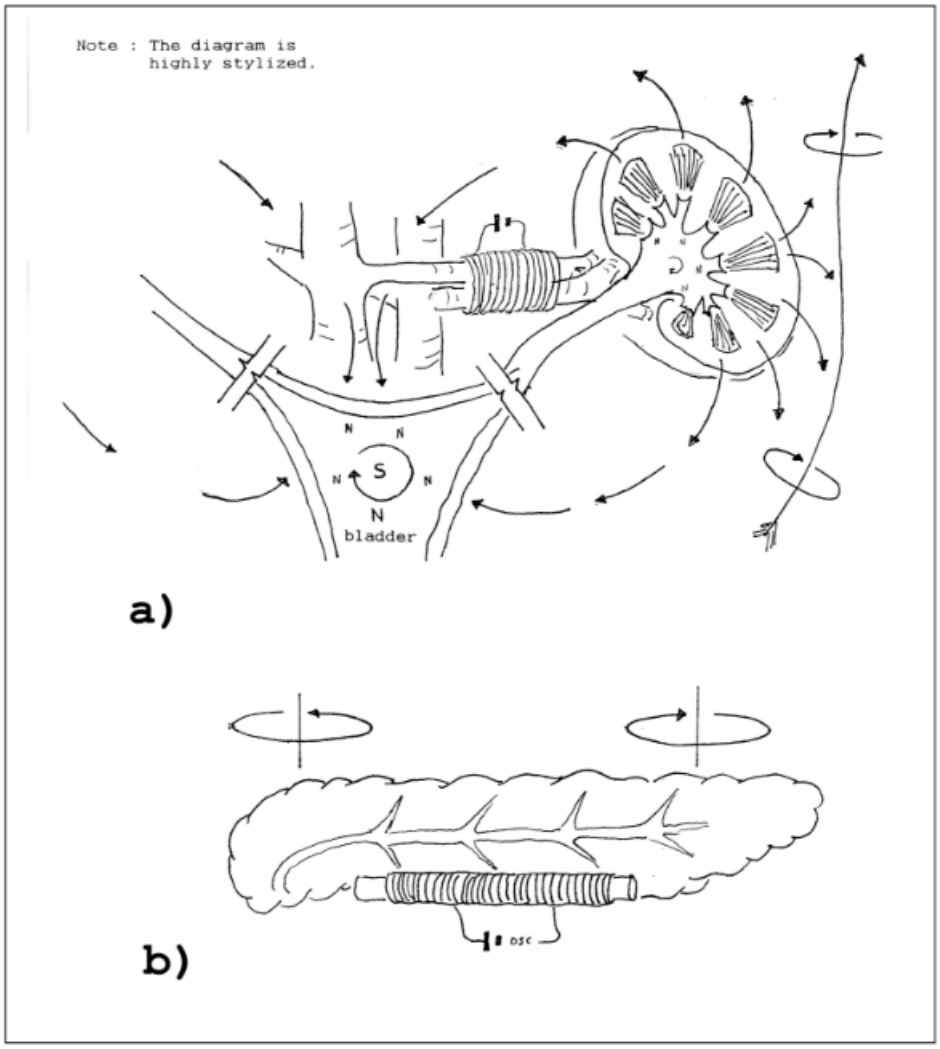

Figure 7.16: Experimental Techniques in Medical Research

a) An "air core" electromagnetic induction procedure in the venal and arterial branches of the kidney. (Core contents affect magnetic intensity levels.)
b) "Iron core" electromagnetic stimulation of the Islets of Langerhans. (Since this endocrine gland is both heme vector and ion pathway stimulated, an intensification of inductive concentrations will alter metabolism through the alteration of blood dispersion.)

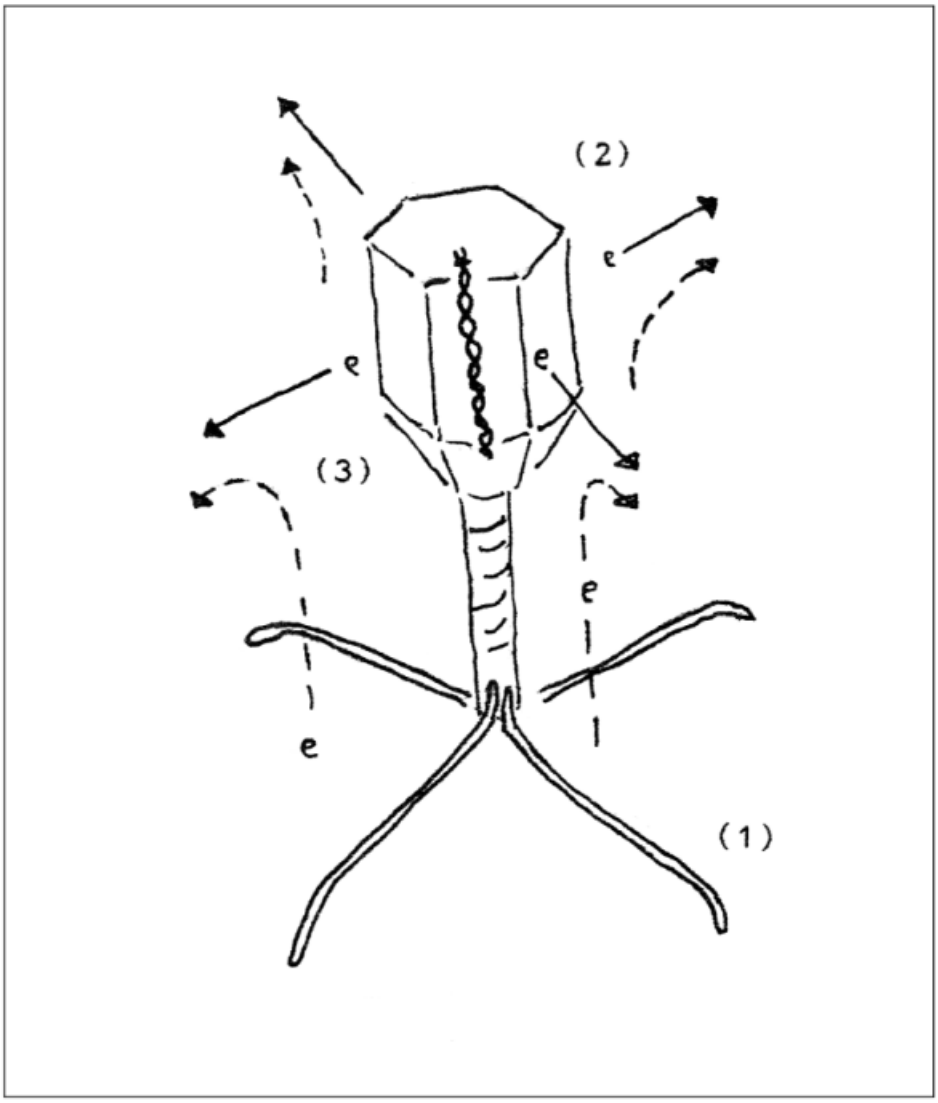

Figure 7.17: Self Assembly As A Function Of Environmental And Self-Induced Electromagnetic Influences

(1) Antenna products, in self assembly, absorb anatomically induced magnetic patterns, and thereby cause an electromagnetic depletion zone. They align axially while doing so.
(2) Protein induced electron evacuation causes the further protein alignment which leads to the encapsulation of DNA. These evacuation patterns can also cause DNA to be converted into its dormant forms.
(3) The central trunk of the virus allows the structural conversion between the magnetic concentration of the antenna, and the electron-evacuated patterns of the capsule.

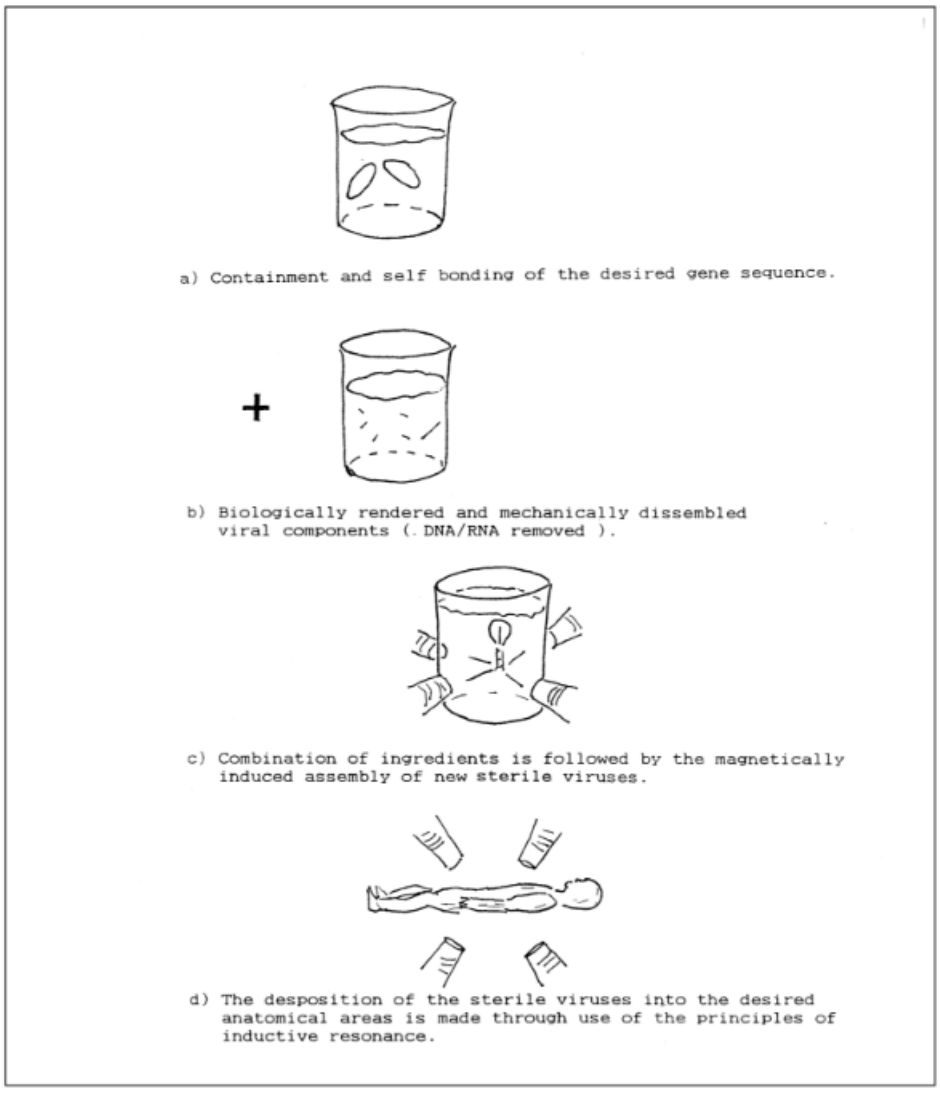

Figure 7.18: A Sterile Virus Method of Gene Delivery

Notes

Chapter 8

Pharmo-kinetics and Immune Function

8.1 Peptide Energetics

Peptide energetics is the study of protein molecules to determine how they work as mechanisms. For example, the pleated sheets and coils of a peptide are not merely oddities of a geometric construction, they are a mechanism with very distinct electromechanical properties. In this they follow the logic which allowed us to create a machine theory of dna. The property of magnetic continuity through p-orbitals allows us to look at protein folding patterns as if they were strands of magnetic wire. By this means, machine functions such as voltaic generation in enzymes can be derived.

Three general types of folding patterns are discernable, the peptide coil, the parallel pleated sheet, and the anti-parallel pleated sheet. Each structure has mechanical properties which relate to the role of s-electrons in supplying the electrons for machine function. As shown in figure 1, the rotation of each s-electron in a long peptide line bond could be resolved into in the same vectorial zone when the field of the long wire length becomes predominate over the shorter side chains.

The implications of this for a polypeptides structure is important: In the formation of a molecular "length", the rotation of the s-electrons of each atom of that length must be in the same direction, regardless of the duration or subsequent nature of that length. Hence, in polypeptide formation, a linear structure having polar

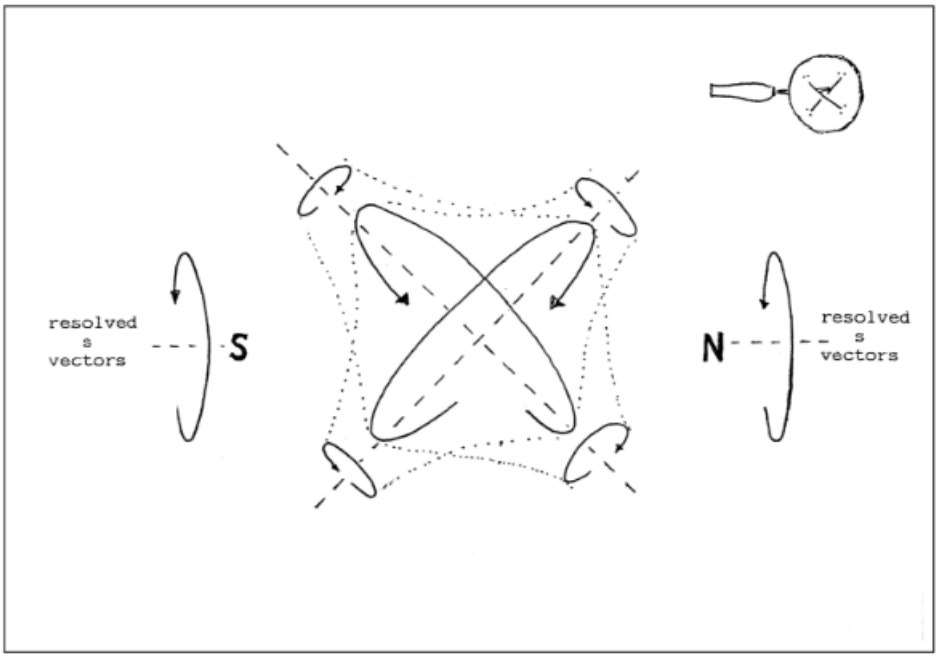

Figure 8.1: S-Electron Spin Direction in Organic Atoms

magnetic properties along the axis of its length is initially formed. S-electrons supply the electrons for peptide function. Support for this theory can be gained by noting how the resolved patterns of s-rotation reinforce the structural energetics of p-orbital rotation. To cause misalignment of internal atomic s-energetics is to destabilize the p-orbital concept. Furthermore, the unilateral preference in the "hand" or helical arrangements of bio-molecules like DNA suggests this principle is far reaching.

By use of the more specific understanding of s-electrons, we may begin to see how polypeptide function relates to the differences in parallel pleated sheets, anti-parallel pleated sheets, and peptide coil energetics. In this, the center of a coiled peptide structure is s-electron evacuated as the electrons are forced towards the coil's end. In this way, a peptide coil can supply an electron or two for enzymatic type activity. In the parallel pleated sheet, the peptide "wires" are parallel to one another, so the larger s-energetics make a sheet which can exhibit a steady state polarity like a flat magnetic sheet. In overall magnetic polarity, it is like the polypeptide coil. By contrast, in the case of the antiparallel pleated sheet, the bonding lengths take reverse turns, and so the structure is an-

tagonistic to the steady state polarity concept. In resolution, the s-electrons of the bonding length must either oscillate in turn, or remove themselves outright from the area. Most likely though, we gain a oscillatory radiographic molecule. The coiled peptide may share this feature in the sense electrons must take turns, and cause oscillations, when moving through the coil's ionized center.

The R-group bonding which is responsible for the curios of peptide folding are of themselves subject to the rules of energy minimization in their binding patterns. This affects how the R-group's s-electrons work to form their respective polypeptide substructures. In the helix and the parallel configuration themselves, the R-groups protrude outwards on one side to form bonded structures whose s-energetics align within the larger structure. In the case of the antiparallel pleated sheets, the R groups protrude on both sides to facilitate alignment in the oscillating structure. Figure 2 shows aspects of this argument.

This insulin molecule is a good candidate to study voltaic generation by enzymes. Here the concept of electron supply by the peptide coils and the concept of adding a discrete direction to this supply through the use of a parallel pleated sheet can be seen. This pattern represents the simplest type of enzyme activity. Much study will be needed to to fully refine our mechanical understanding of peptide energetics. **Fig. 3**

8.2 The Activation Sensitivity of DNA

Super-coiling of the DNA is much more than a mere oddity of nuclear compactness. It is a dynamic occurrence which affects the ability of genetic material to express itself. This section will show how various types of DNA winding patterns leads to areas with differing types of ionic charges, and with different types of sensitivities to physical energy influences. The mechanism which propels this occurrence is, of course, electrical oscillations within the DNA.

The mechanical-chemistry theory which is pivotal in this portion of the study is the theory of ion dispersion and enhancements based on the application of magnetic fields. Earlier in the book, I showed how the convergence of magnetic pressure, whether from oscillations or gauss fields, creates an cationic charge within its core area. Likewise, I suggested areas of magnetic bipolar convergence cause areas of negative charge attraction, and as such, tends to attract anions. Now consider how, on super-coiling, the DNA cre-

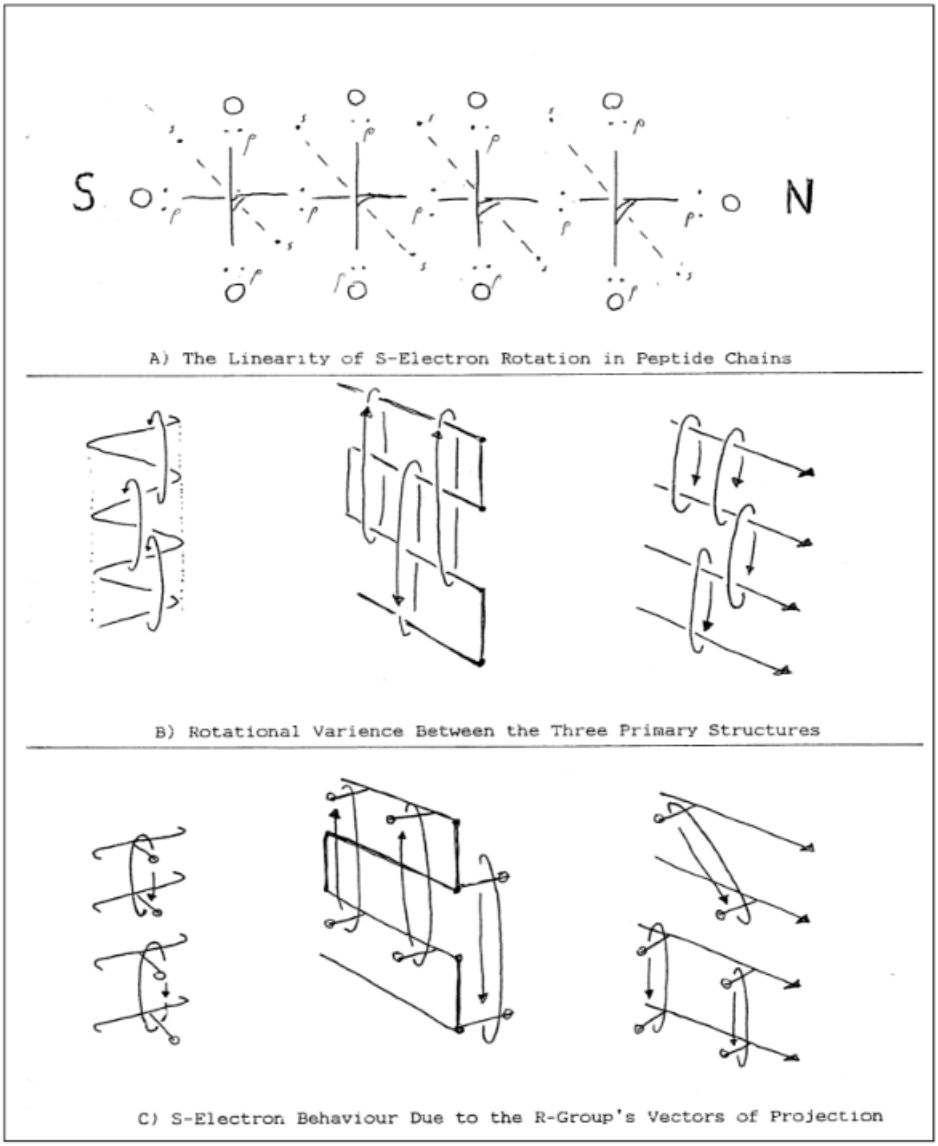

Figure 8.2: Electron Movement in Folded Peptide Structures

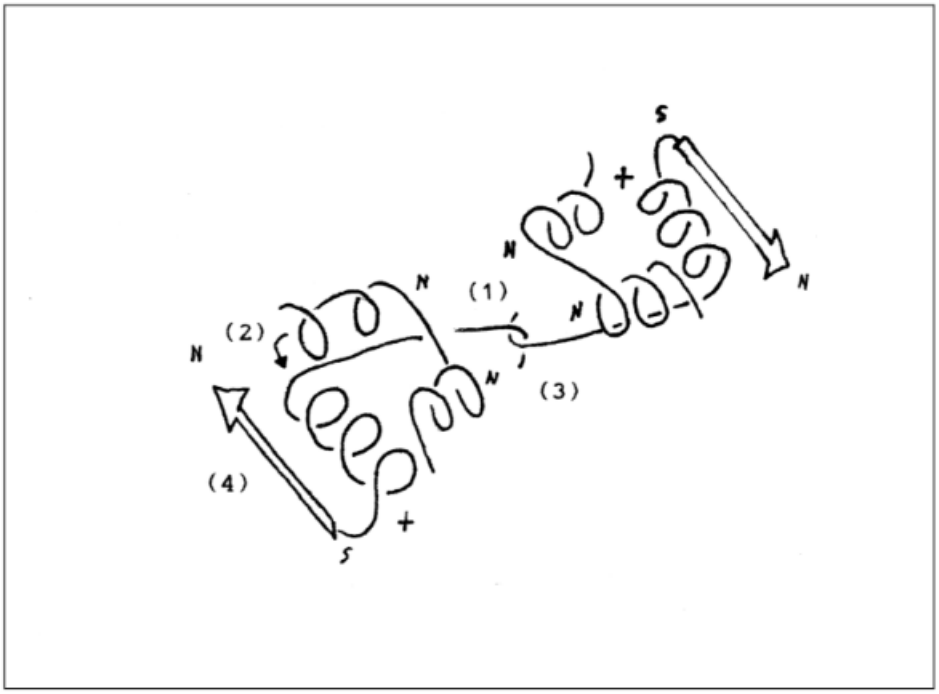

Figure 8.3: Voltage Generation By Insulin Molecules

(Insulin molecules may operate in tandem or singularly within the receptor protein mechanism.)
KEY (1) The a chain is counter-wound to facilitate one dipole center.
(2) The coil of the b chain aids in the redirecting of the electromotive force.
(3) The legs of the b chain interconnect to allow anchoring.
(4) Pleated sheet structures provide lateral stabilization, while adding direction to electromotive force (EMF) generation.

ates magnetic structures which also induces these effects. This is most easily seen in the banding patterns of dyed chromosomes, as only certain bands take up the electrically charged dye. We must examine more closely the nature of this association. As the DNA super-coils, and condenses, it presents oscillating magnetic patterns inward onto itself, and thereby changes the dispersion characteristics of free electrons within its sugar tubes. In areas where the windings presents multi-polar magnetic fields concentrated on a focal area, areas of electron concentration can occur. In these areas the charge component of the concentration takes precedent, and DNA stimulation by electrostatic fields in more likely to occur. In the event the DNA cannot balance out its energy fields, it will attract anions and anionic molecules to achieve this end. Indeed, the presence of negatively charged molecules in these areas allows at least a temporary homeostatic point to be achieved. **Fig. 4**

In areas where the DNA super-coils are arrayed so they focus unipolar magnetic oscillating fields on a certain point, a positively charged focal area is created. Therein, the electrons attempt to evacuate out of this area of the sugar tubes. This electron evacuation can lead to an area of radiographic sensitivity, as there are no electrons nearby to freely absorb the oscillating portion of the magnetic energy. If, for some reason, insufficient electrons can be evacuated, positive charge anions and molecules, can enter in close proximity to the DNA and achieve homeostasis. (These ions themselves are thought to be more radiographic sensitive, as they absorb radio frequencies rather easily.)

Exclusive of the induction of a gradient on the nucleus of the cell, it seems likely specific ionic concentrations occur in the super-coil's focal areas. The reasoning is the oscillation of the electrons allows the reentrance or removal of electrons from the DNA ion traps. The ion traps are a communicative property of these oscillations. Similar to this, it is also likely a gradient of magnetically induced electrical charge applied to the entire cell, can affect the ionic properties, hence the dispersion characteristics of different parts of the chromosome. This affects cell differentiation. To fully understand this, consider how the two categories presented above are not mutually exclusive but express a range of possible arrangements, all of which can have further layers of structure which use these ion traps as sub-mechanisms within larger ion traps. (In other words, some ion traps may have a gradient forced on them by other larger ion traps). Similar to this, the induction of an exterior gradi-

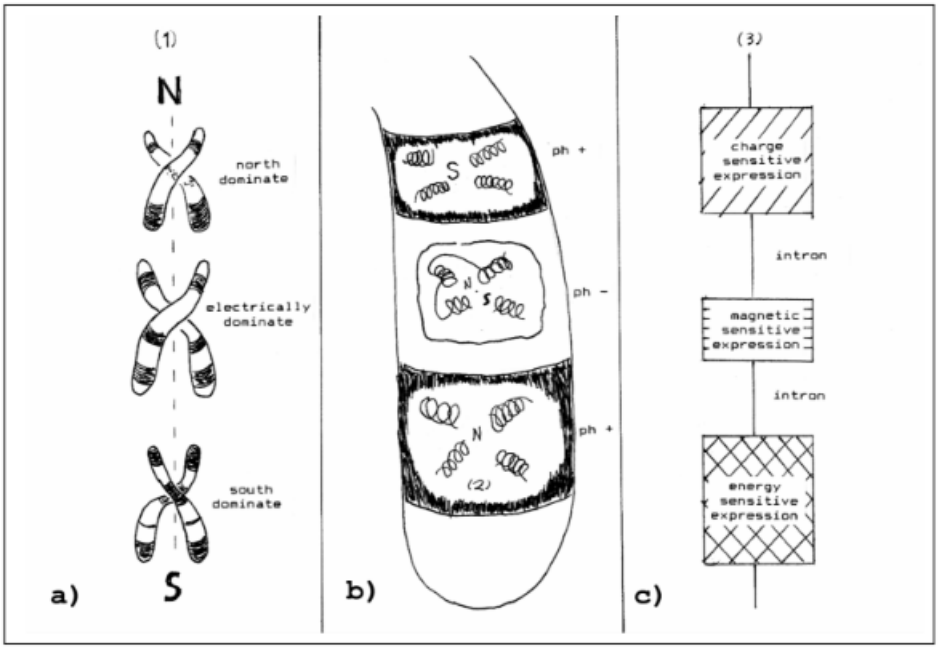

Figure 8.4: Dna Winding Patterns As The Cause Of Chromosome Banding Patterns

(a) An electromagnetic hierarchy is shown during mitosis.
(b) Banding patterns as produced by DNA winding patterns.
(c) Exons and their energy sensitivities.
Key: (1) represents the magnetic field line of cell during mitosis, 2) shows a simplified conception of DNA winding patterns within chromosome bands, and 3) represents a length of DNA strand.
Explanation: Although the DNA/chromosome is greatly simplified here, the banding effect may be seen to be the result of a greater mathematical accumulation of one particular DNA energy sensitivity over another in a certain area of the chromosome. These sensitivities arise from the mechanics of magnetic convergence during electrical conduction within the DNA. Like polar convergence can cause cationic areas, and unlike convergence may be seen to cause anionic areas. The exactness of the super-coiling mechanism arises from the positioning of the introns within the DNA strand. These control folding of the helix and hence help give the DNA's super-coils a specific shape. The overall premise of the greater abundance of exons of a particular sensitivity to physical energy in a particular chromosome is most clearly shown in how the replicated chromosomes line up in a polarization hierarchy during mitosis.

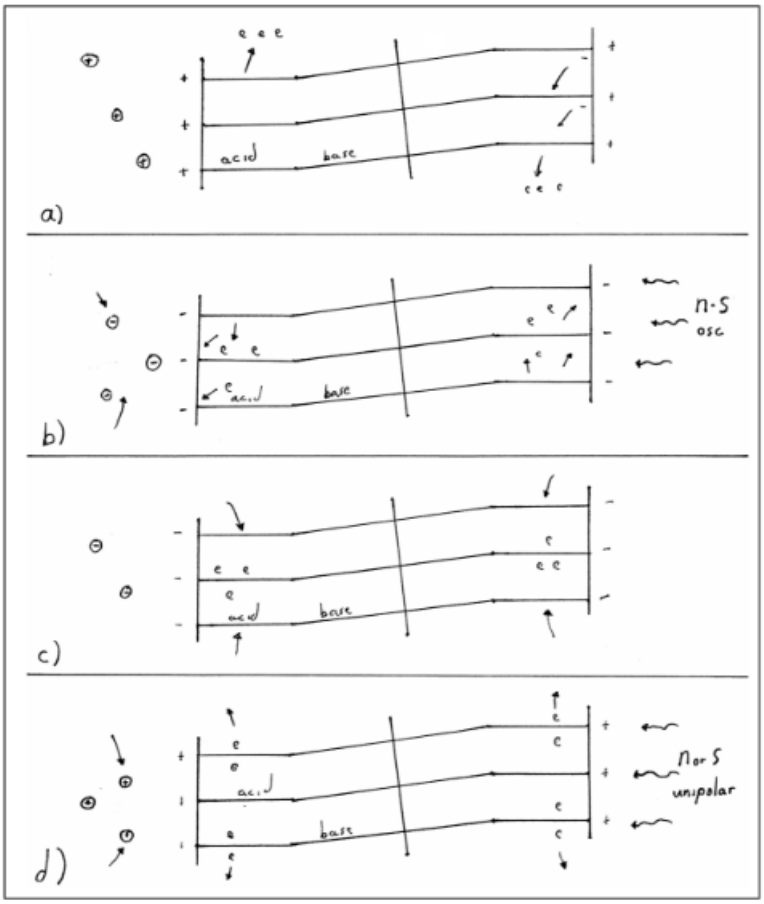

Figure 8.5: Electrolytic And Magnetic Conditions During Dna Activation

(a) Electron evacuated DNA in the static position
The field effects of super-coiling has caused electrons to be evacuated from the DNA. The convergence of like magnetic poles within the super-coil allows this to occur.
(b) Electron evacuated DNA in the dynamic condition
As anionic charges appear in the proximity of this type of DNA, or as it comes under the effects of exterior magnetic oscillation, electrons (or cations) can move into the area and reactivate the genetic expression of the exons.
(c) Electron enriched DNA in the static position
Super-coiling's field effects have caused electron enrichment to occur. The area then seeks positive ions.
(d) Electron Enriched DNA in the dynamic condition
As either cationic charges or converging unipolar magnetic fields influence the electron enriched areas, they free up the Dna's electrons and thereby allow DNA activation to occur.

ent on the cell's nucleus by cell surface proteins, neighboring cells, interstitial spaces, or directly applied structured electromagnetic energy fields can have profound effects on the function and gene expression of the DNA.

The simplest type of stimulation is ionic stimulation, a condition where the consolidated chromosome's ionic areas are stimulated by ionic forces unlike its own. As this occurs, it moves the DNA away from its homeostasis point and into a dynamic operating condition. Thereby, RNA can be produced. This ionic stimulation can be the result of magnetic convergence. Compounding this, some DNA winding structures have a sensitivity to magnetic fields. The chapter on morphogenetic development covers this aspect.

8.3 Ion and Ph Levels in Cellular Domains

The definitions of anions, cations, acids and bases within context of s-electron based physical chemistry is very subtle. The subtleness lies in both the variance of subatomic structure in ions, and in the complex structural organization of polypeptides. The interaction of these two phenomena, in so much as polypeptides tend towards the acidic and ions tend to the cationic, leads to the important associative process called "availability" in the DNA. This is complicated by DNA structure itself, which is capable of being either cationic, anionic, acidic, or basic, depending on winding patterns in the chromatic structure. The question is: To what extent is a cation a base, and to what extent is an anion an acid? How do these various definitions help us categorize biological action?

To answer the first question is to establish classification: Therein an anion is a reacted acid. It is neutralized by a positive charge. Hence it is negatively charged. Similarly, a cation is a reacted base. It is neutralized by a negative charge. Hence, it is positively charged. In each case, there has been a transfer of energy (see below for causes) which has caused an atom's or molecule's s-electron count to alter. In the case of an anion, easily strengthened s-energetics have allowed an electron to be picked up, and hence, the structure has become less magnetic and more electrical. In the case of a cation, easily separated s-energetics has allowed the loss or movement of an electron, and hence, the structure has become more magnetic and less electric. In this ionization a structural

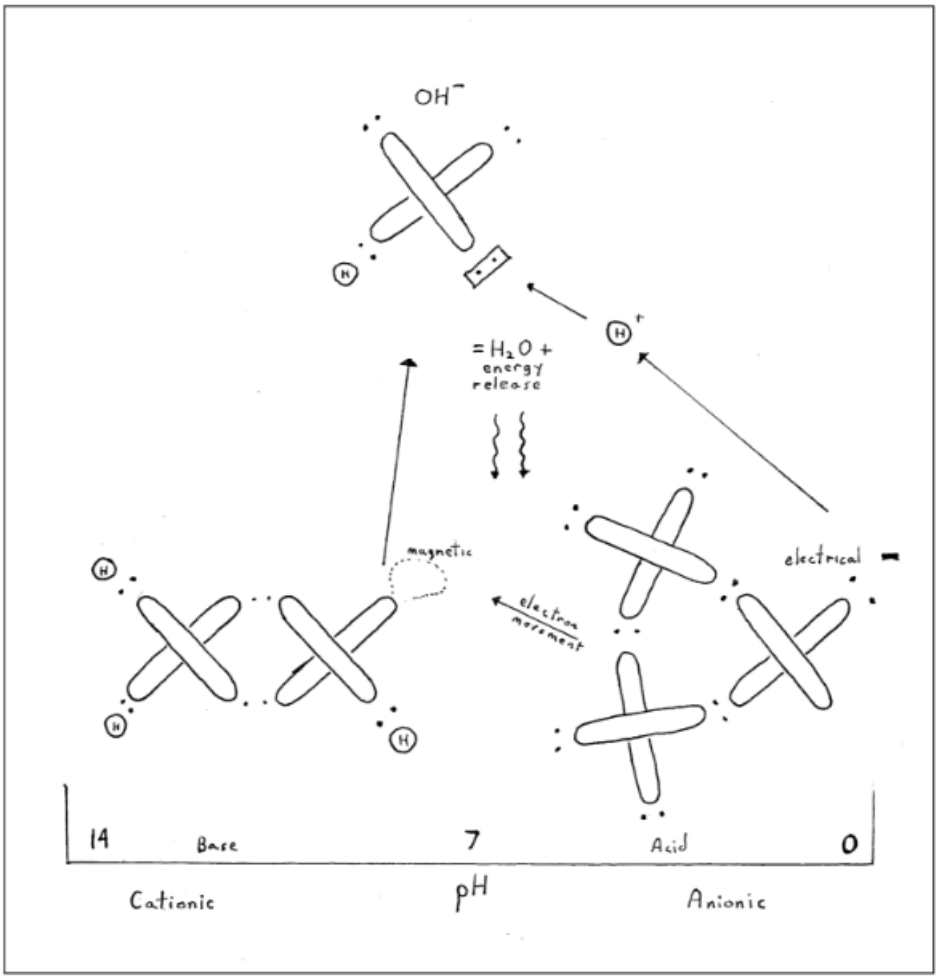

Figure 8.6: An Atomic Definition of PH States

homeostasis is reached with the aqueous environment: The aqueous environment is the driving force behind the reacting molecules. Moreover, the products of the reaction, the protons lost from the acid, and the hydroxyl lost from the base, are those components which combine to become, in a release of energy, the aqueous environment itself. The following diagram helps visualize this complex conception. **Fig 6.**

In the last paragraph we saw how the reduction to an ionic state caused changes in the electrical and magnetic content of the ion. It is therefore reasonable to suggest that the application of electrical and magnetic energy to a molecular structure does thereby alter the ability of the structure to react to their medium. This idea

plays a key role in determining the physical sensitivity of DNA.

8.4 Electrostatic Areas in Cellular Differentiation

In a preceding section, we established the means by which polypeptides windings generate voltages on their own or when under the influence of transitory magnetics. According to theory developed so far, the magnetics may consist either of oscillation of a field and the subsequent reception of energy, or of the movement of a polypeptide in a stream through a gaussian field. Either way, enough energy is transmitted to allow the excitation of the s-electrons of a molecule into a higher state. The result is the specific generation of voltaic or radiological "signals". This observation is of key importance in understanding physical biochemistry, and general pharmaceutical phenomena. The next step is to show how voltage and radiological generation by polypeptides are the basis of the immune system as it is known molecularly.

To start, both a more extensive analysis of electromagnetic phenomena and a more thorough development of electrostatic theory will have to be made. We begin by studying the overall role of electrostatics in cellular differentiation. This problem can be sectioned into three parts. First, the dependent behavior of electromagnetic phenomena in the environment of a singular electrical charge must be determined. Second, the general behavior of the cell's DNA/chromosone, mitochondria, and membrane surfaces, when in negatively or positively charged ionic areas must be understood. Thirdly, the relationships in differentiation between the conductive line bonds of earlier theory and the electrostatic areas of present discourse must be divulged. Overall, differentiation theory must reach a higher level of verification with respect to empirical data.

Favoring the study of the immune system in differentiation theory is the voltaic patterns which occurs at key areas in the morphogenetic dipole. These areas align with thymus and vertebrae development, anatomically. Complicating this alignment, in so much as it relates to the thymus, is the interaction which occurs between fluid cell and non fluid cell theory. In the sense of organ development, the thymus may be seen as a result of the resolution of heme vector and ion conductive pathways. Therein, the predisposition of lymph system of the heme vector to the exterior leads to an area

in front of heart differentiation where lymph forces are manifest. This becomes the thymus in that specific area. The bone marrow, by contrast, is being shielded from electromagnetic influence by the developing bone structure. In either case, ionic pooling is apt to occur. **Fig. 7**

To better understand how electrostatic areas are caused, spatial relationships must be remembered. Anatomically speaking, cells are very small devices whereas voltaic areas are comparatively large domains. Therefore, regions of the marrow or thymus may be seen as incipiently polar with varying degrees of charge as based on the magnetic tension which was induced by the ion conductive dipole. The nature of the charge is decidedly cationic because the predisposition of the dipole is to the removal of electron charges from the associative areas. There is a qualifier here: Different cations will behave differently within context of the voltaic areas. From empirical evidence, we can see that calcium in particular predominates in circular rings around the bone marrow. This may be counterpointed by the observation which shows ferrous ions precipitate towards the center of this ring. A study of the subatomic structure of the iron atom shows the positioning of the magnetic vectors in the diploid area inside bone structure is most suited to the alignment of the iron ions as opposed to calcium ions.

Of interest to this study is the local magnetic vectors which exist as a result of like charged ionic pools. They determine not only the electrical stimulus being placed on the cell in the smaller scale differentiation complex, but also the intensification of magnetic influences being placed on the cell by the predominance of the ferrous ions in exclusion of other ions. The previous diagram showed how local areas of magnetic evacuations (or absences) exist in conjunction with electropositive or electronegative charge areas. The influences these forces have upon the behavior of DNA, mitochondria, and membrane surfaces may be summarized by first dividing cell lines into two distinct cell lines, one being called for generic purposes the "magneticore" and the other being called the "staticore". This logic was born of differences noted in the study of glial/neuron relationships in the spinal cord.

In the early lymphocyte, which in this case is codified for the staticore cell lineage, the cells exist in cationic pools with various levels of magnetic evacuation being precipitated by the presence of ferrous ions in perpendicularly orientated erythrocytes. The mitochondria's development is greatly affected by these different

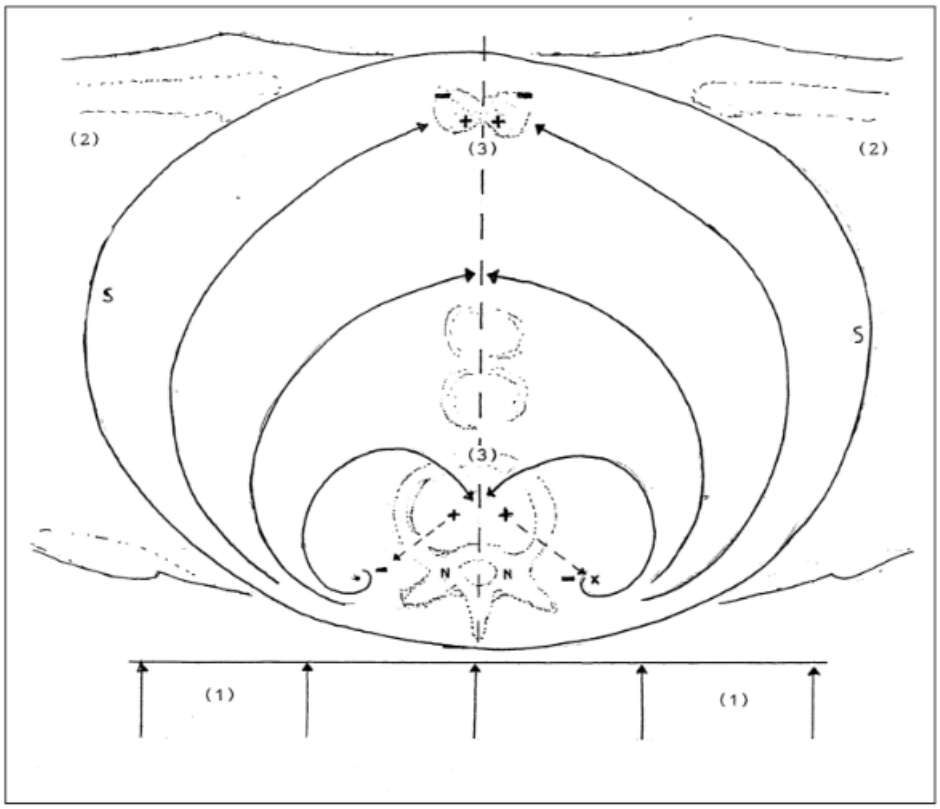

Figure 8.7: Energetics in the Thymus and Marrow

In this diagram, (1) shows how dipole shape changes with the folding of ion conductive pathways, and the resulting interconnection of magnetic fields, (2) shows where limb budding changes the initial anatomical pattern, and (3) shows how field lines are angled in the thymus and bone marrow regions of the spine. The thymus becomes dependent on the appearance of secondary magnetic vectors to induce EMF patterns. In contrast, in the marrow area, magnetic shielding by bone development results in a differentiation area which is shielded from magnetic radiation. Ionic pooling occurs.

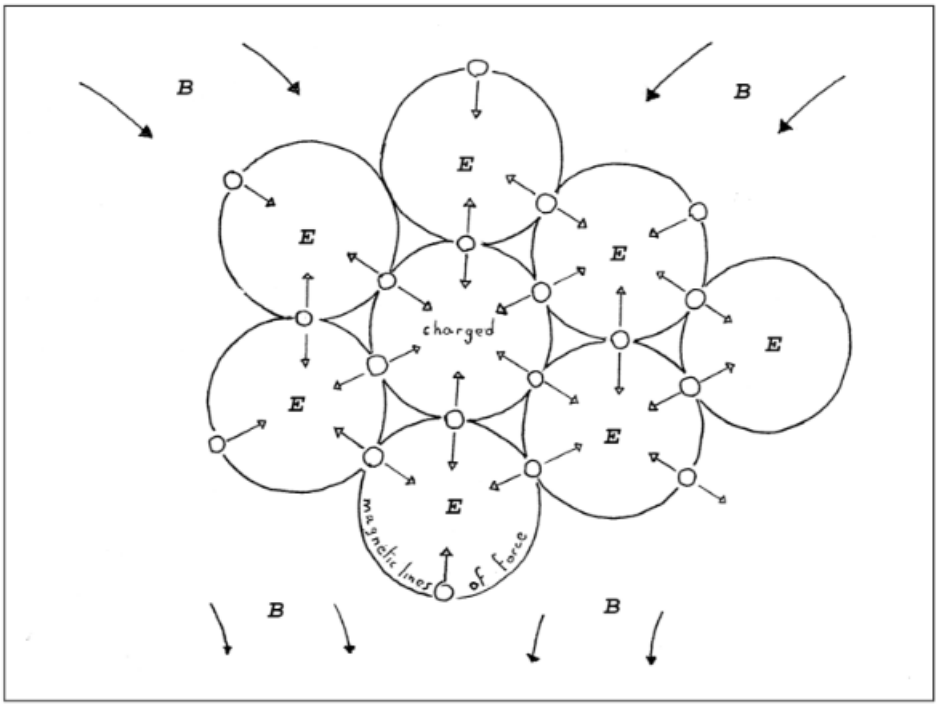

Figure 8.8: Magnetic Field Behavior Around Electrostatic Areas

In the micro environment of the thymus, intramolecular vibrations between ions allow for separate and distinct areas of magnetic fields and charge areas to be created. The ability of the ion conductive pathways and heme vector to completely control differentiation is lessened and the stage is set for thymocyte processing in the pre-adolescent body. "Magneticore" cell lines appear to form the tissue patterns, while the fluid cell lymphocyte follow the "staticore" line.

conditions. As general rules, it may be said the spin of the mitochondria, and, therefore, its size and its coupling energetics, are a function of the degree of cationic charge in the cell envelope. The greater the charge, the greater the spin and the greater the coupling. Therefore, the lymphocyte is apt to have small mitochondria of high spin rates and high levels of coupling. The categories are not mutually exclusive however, and in the magneticore cell lines of this area, it maybe shown how different rules apply. Magnetics, insomuch as their geometry is roughly equatable with two types of vector domination, control the assembly of the organelle. Only certain enzymes can "fit" a certain magnetic pattern.

Concerning DNA, the lymphocyte itself is subject to strong anionic forces as precipitated by its histological position. In contrast, the magneticore DNA is affected by magnetic influences of a decided polarity. To understand the resulting action, DNA energy types will be broken into four classifications which are based upon a preceding mechanical analysis of DNA/chromosone banding patterns. These classifications are, firstly, electron evacuated areas, secondly, electron enriched areas, thirdly, gaussian north sensitized, and fourthly,gaussian south sensitized. These classifications,like their predecessors, are not mutually exclusive. They are vectorally oriented.

In staticore DNA under cationic conditions, electron evacuated DNA areas, because they are positively charged, are condensed by the cations. Therefore they are not available for transcription. The electron enriched DNA areas are negatively charged however, and hence,are available for transcription. This establishes the basis of DNA availability in the staticore lymphocyte line. In the related magneticore cell line, the predominance of northerly vectored gaussian based energy results in the expression of north sensitized DNA. Stated otherwise, the applied gaussian field applies the electromotive force necessary for the movement of electrons from an electron entrenched to an electron evacuated area. One might argue, in counterpoint, the chromosome is fluid in regard to alignment, but chromosome positioning in the nucleus would seek overall energy minimization along its polar axes with the applied field. The sensitization works within context of this overall stabilization.

The influence of magnetics and statics of the shape of the nuclear envelope can be taken directly from the observations of bone marrow histology. In the lymphocyte staticore lineage, the nuclear envelopes are enlarged. This is caused by the resolution of DNA

and mitochondrial forces into a dynamic equilibrium. In this case, the DNA is found to be comparatively "stronger" than the small, highly coupled mitochondria. In contrast, the nuclear envelope of the the magneticore line, with their incumbent quaternary vectored chromosomes, are encumbered by a diploid linearity. This leads to the exclusion of the nuclear envelopes in erythrocytes of this origins.

Of interest to immunology are cell membrane polypeptides: Membrane expression of polypeptides is subject to the physical forces under which the cells live. If a polypeptide is to exist on the membrane of a cell, it is required to be in homeostasis with its physical environment. This homeostasis is achieved through the expression of polypeptides which, when inactivated, are similar in polarity or charge to the environment in which they exist. By accomplishing this they establish structural stability within cellular lineages. Obviously then, the four phenotype mutually inclusive classification system we established for the DNA and mitochondrial areas, also exists for polypeptide expression on cell surfaces. Therein, classification according to the physical changes membrane polypeptides imprint on cell structure during activation seems reasonable. The next diagram sets the foundations for understanding this classification, while simultaneously showing its sister classification in a reductive analysis. **Fig. 9**

The subject of stability in differentiation now becomes predominate in the study of the cellular mechanism. We may state here a general rule for differentiated cells: A cell, once differentiated into a definitive structure, will exist in the definitive structure, and, if fluid, will seek to exist in an area which allows it to remain as a definitive structure, until such time as that structure is redefined through extracellular events or further differentiation. The migration of lymphocytes to the thymus area to undergo further differentiation is evidence of migration which adjusts homeostasis. Once in the thymus region, the apparent difference which exists in the stimulative ion conductive geometry of T lymphocyte differentiation is a reverse in the angles of the magnetic inductors to the base line of the induction in bone areas. This similar but reverse angles may be the signal which "tricks" the lymphocyte into taking up residence there. Complicating this keying is the now stronger influence the heme vector has in the area. Altogether, this refines the differentiation of the T cell. Mitochondrial assembly, DNA energetics, and the electronics of membrane proteins would be subtly

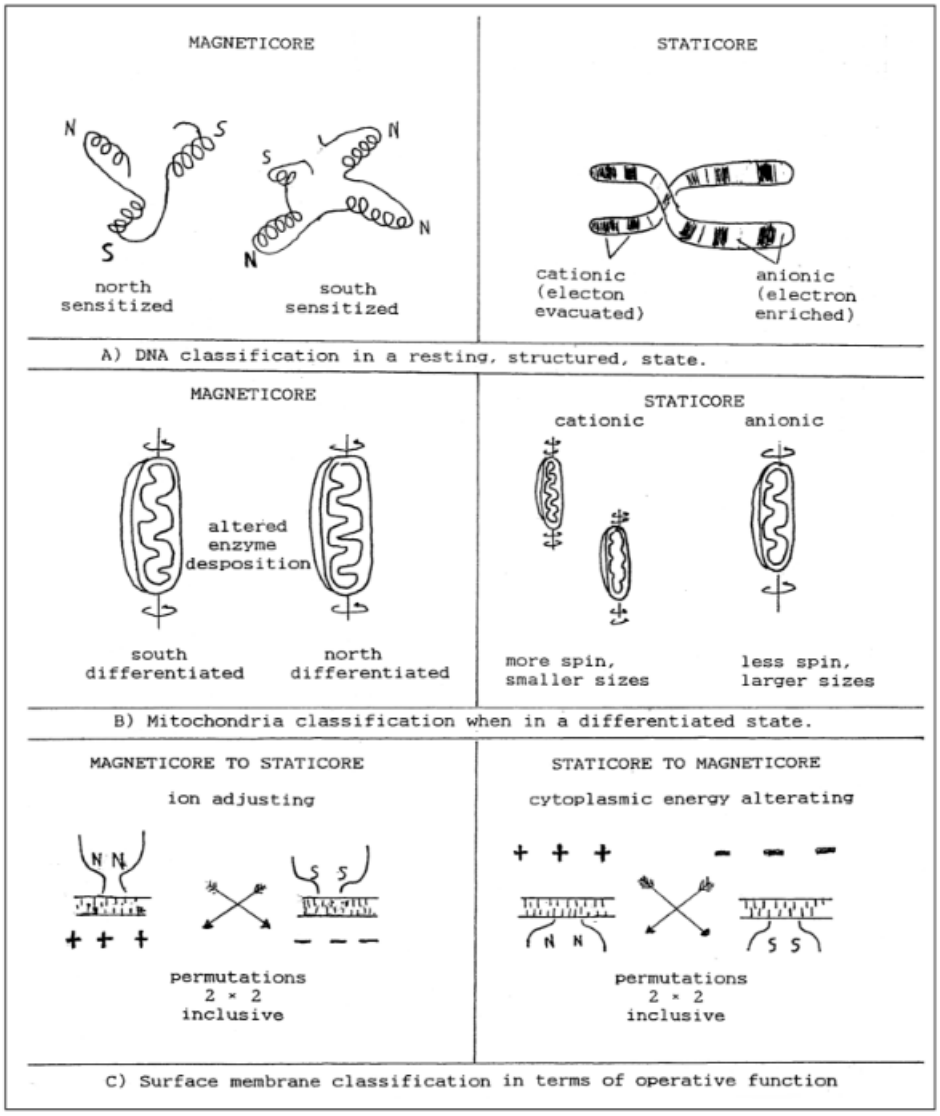

Figure 8.9: DNA, Mitochondria, and Membrane Protein Classifications

changed.

Within context of T and B lymphocyte differentiation, the next anatomical area of interest is the lymph nodes. There, a conjunction of the energy forces incipient in the thymic and marrow regions must coexist. This conjunctive force allows for cell membrane based reactions between immunogenetically mutated T and B cells. Ion pooling in lymph node areas appears as part of the differentiation structure of this area and these ion pools are conducive to the T and B cell association. In differentiation the lymph nodes arise at points where the ion conductive pathways twist.

The histological similarities between various immune system regions give us only clues to their energetics. The immunological areas are generally cationic and this begs the question: What happens when the tables are turned, and when a cell is exposed to electrostatic areas which are decidedly anionic in nature? Within the periphery of dipole magnetic areas, these patterns have a probability to exist. Therein they counteract the cationic area of the central dipole convergence. Anatomically, the existence of these anionic areas coincide with the development of the adipose/epidermal area. In terms of classification, the adipose and epidermal cells themselves may be seen to be of the staticore lineage. This reasoning is that the presence and/or incorporation of fatty acid packages imparts an overall negative charge to the cytoplasm. This in turn alters genomic expression in the nucleus, while simultaneously causing the nuclear envelope to shrink as the mitochondria's energetics force the nucleic acids into compression and non availability. On top of this, the mitochondria, due to its slower rate of spin and larger size gives sterols the opportunity to "get aboard" and to alter the coupling mechanism by which the DNA expression came about. In the magneticore cell line of the adipose/epidermal area, there is a projecting mechanism unlike anything found in the cationic area. Hair follicle mechanism, sweat glands, oil glands, and other ductal growths are the most obvious examples of this. Like the anionic staticore line, these are also controlled by sterols in growth and development. A diagram of adipose energetics in warranted here to help clarify the above discussion, and to act as a precursor for later discussions. **Fig. 11**

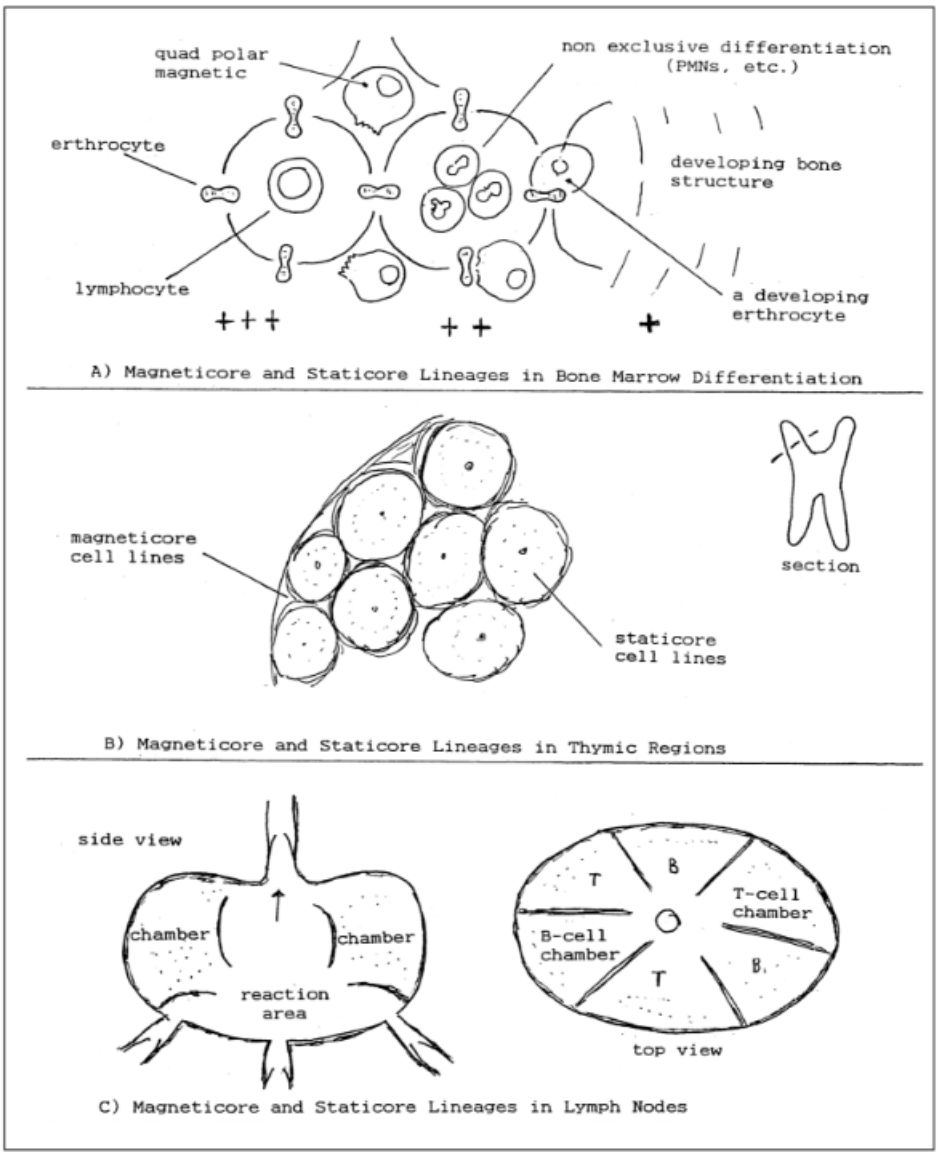

Figure 8.10: Histological Interpretations of Two Vector Dimensionality in Ion Pools

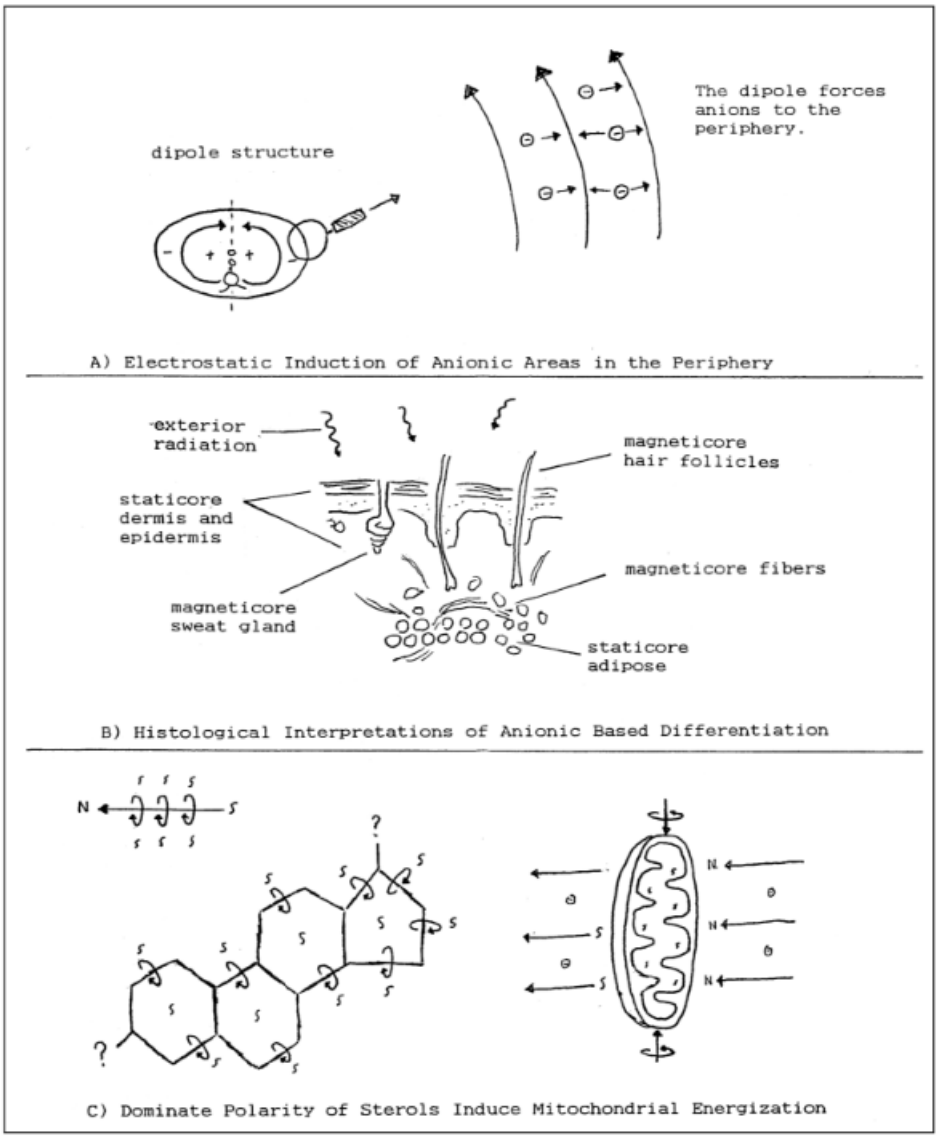

Figure 8.11: Negatively Charged Ion Areas and the Metabolism of Adipose/Epidermal Tissue

8.5 Controlled Mutation Of Genes

In a previous chapter we explored some of the features of anionicity and ph-icity in the cellular environment. Our study, in particular, focussed in on the DNA/chromosome, and on ionicity and pH-icity as it related to these molecules. Therein we established the basis for this chapter on immunogenetic mutation.

Immunogenetic mutation is, in the first instance, dependent on genetic organization in the mutative region. The winding structure must be able to elicit mutation in a controlled manner; it is a highly organized event. Empirical evidence of the general peptide winding structure which allows this event abounds in the literature on molecular immunology, but the molecular reactions are not so well defined. However, by using the empirical knowledge which is present, and the mechanical knowledge we have garnered, a more cohesive understanding of immunogenetic mutation should result. This understanding may later be modified as new empirical knowledge comes about.

A key to understanding immunogenetic mutation is found in the twelve - twenty-three rule of genetic separation. Therein the mutative regions in any mutative action must be separated by introns of twelve and twenty-three DNA sequences, respectively. Each twelve sequences represents one helical turn of DNA, so proportions of one and two turns are represented. The central area between these numbers represents the exon sequences which are cut, sliced, or altered in each step in the mutative process. Each mutative process consists of a series of these mutative steps.

To classify the type of chromosome area in which this mutative process takes place may have been difficult, except for how electron enriched areas are the areas of gene expression in the saticore's cationic line. This fits our definition well because of both the need of some sort of voltaic energy to allow the cutting of specific molecules, and the need of a DNA centered source of magnetic energy to allow some sort of focal control in immunogenetic action. Moreover, the reacted state of the bases in the electron enriched areas is beneficial to the interpretive energetics, as their s-electrons are highly excited.

The interpretive mechanism itself may be seen as being both bidirectional, as in providing information from the two sides of a antigenic molecule simultaneously, and as being linear, as in supplying the above information in a context the mutating genome can

understand . This topic area will be explored later, but first consider the apparent molecular mechanism which allows the mutative process to occur. **Fig. 12**

The bidirectional nature of information transfer into the nuclear area is complicated by the reverse in polypeptide encodement which occurs in this transfer. The reverse allows a negative image of the antigen to occur. This enables a clasping molecule to be called (for in mutative activity. The question is: What mechanism precipitates this structural reversal and its bidirectionally? To answer this question requires a return to the analysis of the environment of B and T lymphocyte differentiation. Therein it was shown how differentiation of these cells takes place in a definitive electrostatic and electromagnetic grid. An antigen, meanwhile, elicits physical patterns which are linear with the geometries of its folding structure. The interaction of these two mechanism causes the equilateral dispersion of the antigen in the lymphocyte's differentiation grid. This occurs in such a manner that any radiological effects of the antigen, as caused by its s-energetics, are focussed into the grid in a manner conducive with the interpretation of the antigen in a reverse and bidirectional manner.

The facet of linearity now deserves attention. How does information convert itself from the folded shape of a polypeptide at the cell's periphery, to a representative of RNA at the immunogenetic center? We know some things from empirical evidence. First, each immuno-variable region of an immunoglobulin molecule is essentially a four strand beta pleated sheet which is modified to align with peculiarities in the antigen. It seeks a polypeptide coil as the center point of its two sided binding mechanism. We can say then the immuno-genetic polypeptide is a linearly folded polypeptide, which, because of its linearity, is representative of a left, right, up, down, grid analysis of one side of the pertinent antigen molecule. We can also see how an RNA protocol for a mutative process can be achieved as an image by reverse operating tRNA. A gap in information transfer exists between these two areas of activity, however. A solution to this may be found in the analysis of how the radiographic properties of molecules are amplified in the dispersed dipole grid. The vehicle for this amplification is the sheer number of antigen molecules which are equilaterally dispersed in the grid: They can easily number in the millions, even when the parts per billions are exceptionally small. Therein we have an energy supply for the information transition. **Fig. 13**

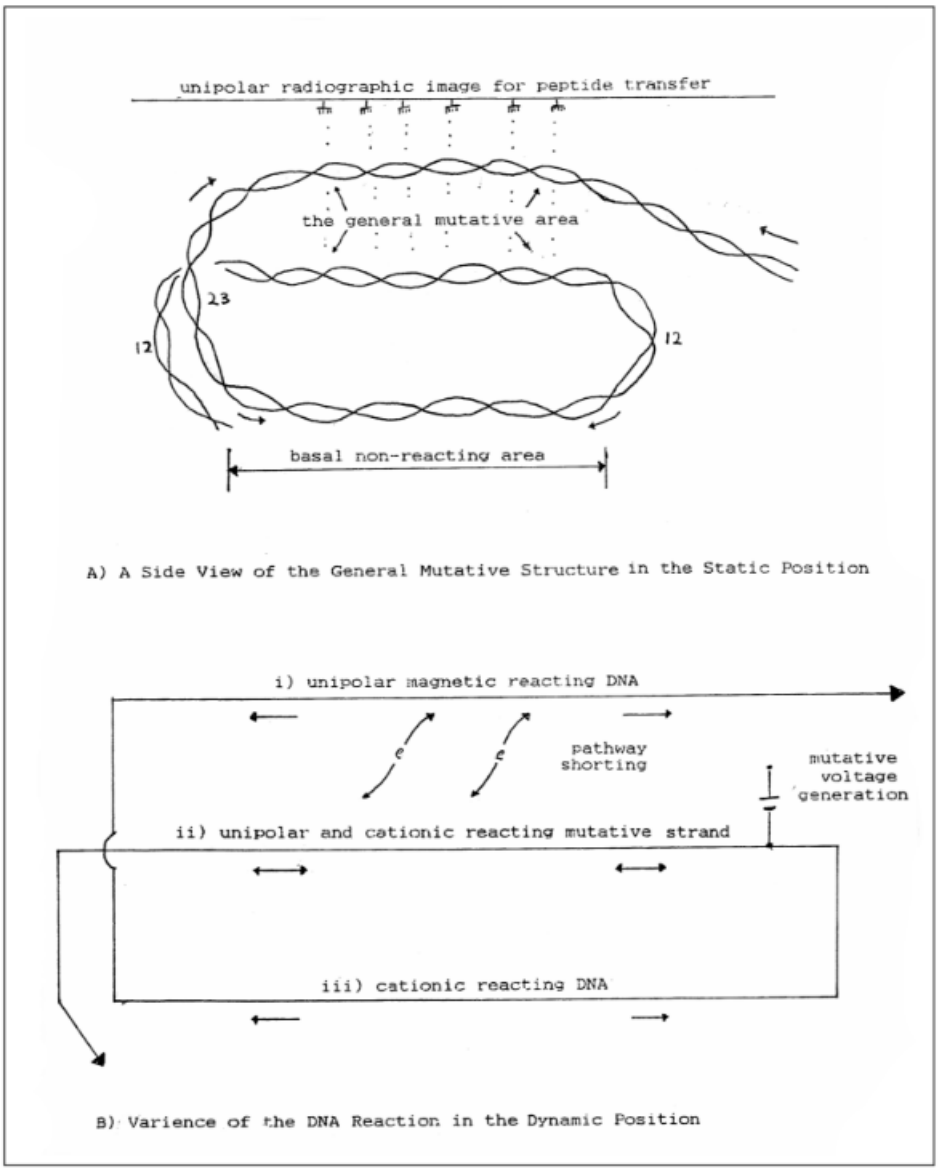

Figure 8.12: Structural Sensitization for Genomic Mutation

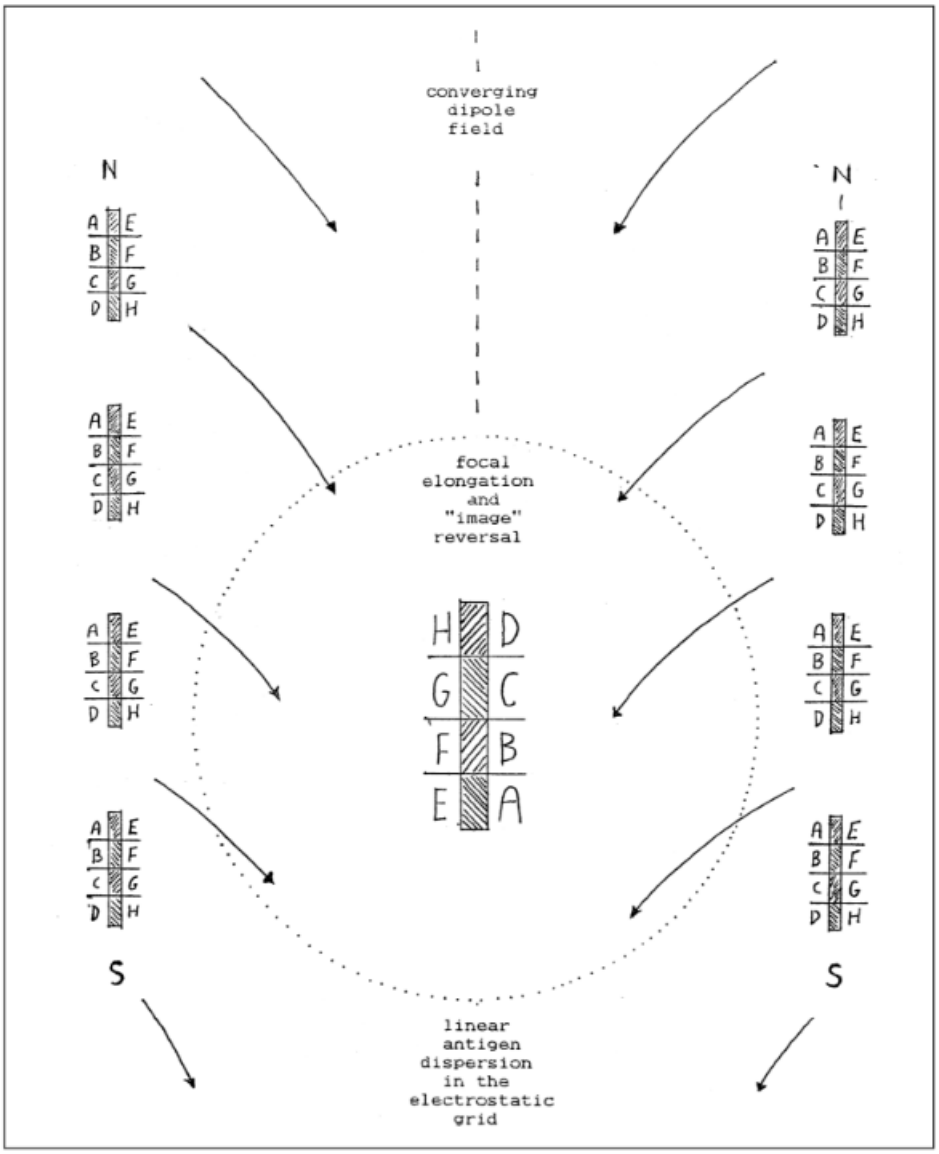

Figure 8.13: Controlled Antigen Dispersion in a Dipole Grid

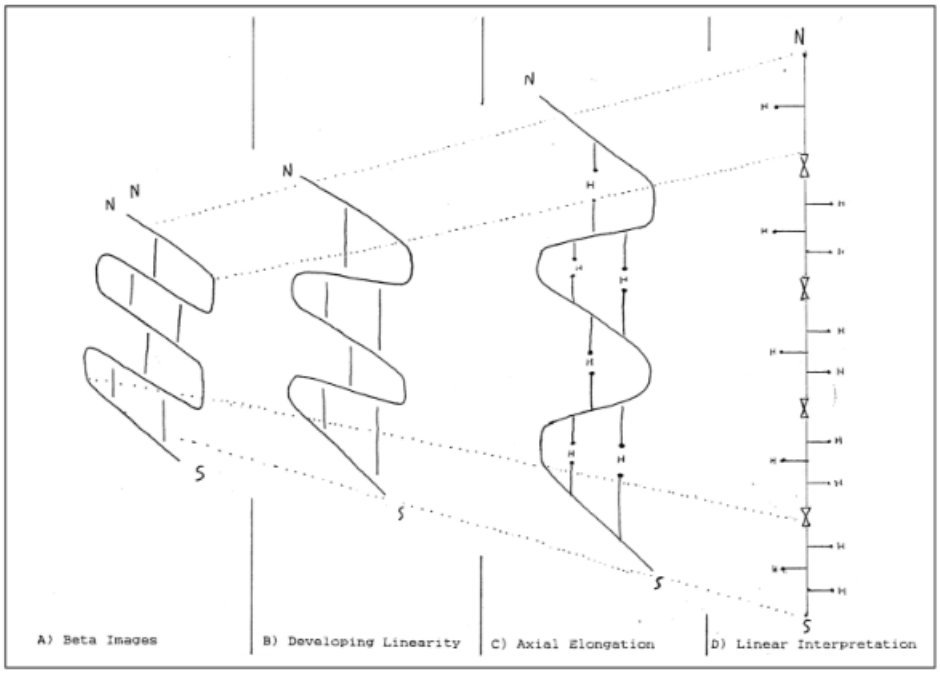

Figure 8.14: Focal Reduction and Polypeptide Interpretation in Immunogenetic Mutation

The "straightening of information" which occurs as signals move towards the nucleus' center can be seen as a function of radiological focusing. Therein, additive, and subtractive energies, as caused by the relative strengths of different parts of an antigen's signals when in different parts of the dispersion grid, become tantamount. When transferred to the immunogenetic center, the resulting linear signal is available for chromatic mutation activities. Figure 14 examines the overall topic.

In aid of the interpretive mechanism described above is the variance in ph-icity and ionicity which occurs between the nuclear envelope and the interstitial spaces. We have shown in previous discussions how this exists as a result of DNA peculiarities in the ph-icity case, and of cationic magnetics in the interstitial case. The importance this has for the reduction of polypeptides in the interpretive mechanism is it can provide a transition from the voltaic premise of the antigen's radiographic transmission, to a relative ph-icity premise of the ribonucleotide in the mutative mechanism. Aiding this transition is the previously mentioned tRNA mechanism. Possibly, it can act as a separate and distinct mechanism to

switch from the protein radiograph to the RNA protocol.

The understanding of immunogenetic activity is complicated by the dichotomy which exists between the T and B lymphocytes, and by the dichotomies which exist within each of the T and B cell divisions. In the case of the B lymphocyte, the sub-text dichotomy is the result of the idiotype and allotypic responses. These result from the "antigenicity" of the immunoglobulin the mutative process manufactures. In the case of the T lymphocyte response, a differentiation dichotomy exists between the helper and cytotoxic T lymphocytes (Suppressor T lymphocytes have not been demonstrated to be an exclusive cell line.). Their overall variance in differentiation is a result of a immunogenetic response to antigen which has be lysed and held in context of either class one or class two MHC molecules. The resulting two major types of T cells interact with the allotypes and idiotypes to produce the immune response. The complexity of this interaction is simplified by a chart which outlines cognitive analysis when studying the immunological mechanism.

The mutative process is complicated by the sheer diversity of immune activity which occurs when eliciting the immune response. In essence, the physical, chemical, and biological, criteria which must be met in explaining the essentials of the micro-mechanism must also make sense when the overall machine is considered. Therein, its treatment here is by no means perfect, but it does set a logical basis from which other discussions can proceed.

8.6 The Microphysics Of Immune Function

By using information concerning both the oscillatory and the gaussian characteristics of polypeptide components, we may gain a more functional understanding of the peptide mechanism. For example, in the structure of an enzyme, the placement of an antiparallel sheet adjacent to a peptide coil leads to a structure capable of exhibiting a keying function in the acceptance, alteration, and ejection of the molecule. This logic extends into hormone and receptor structures, wherein the receptor's energizing is subject to the specifics of the structures involved. Furthermore, this type of analysis can establish the energetics of immunogenetically altered molecular formations. Therein, we will focus in on the im-

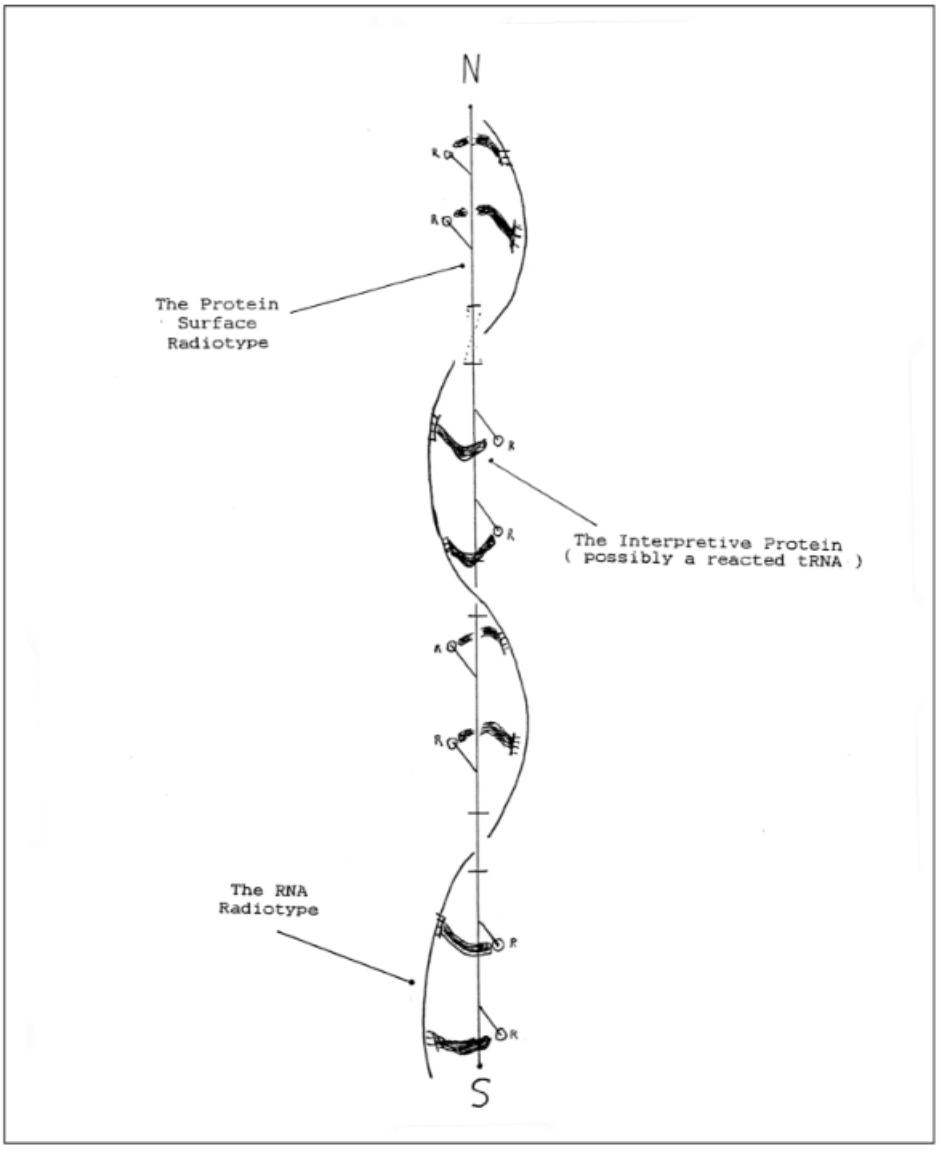

Figure 8.15: Information conversions under Radiographic Conditions

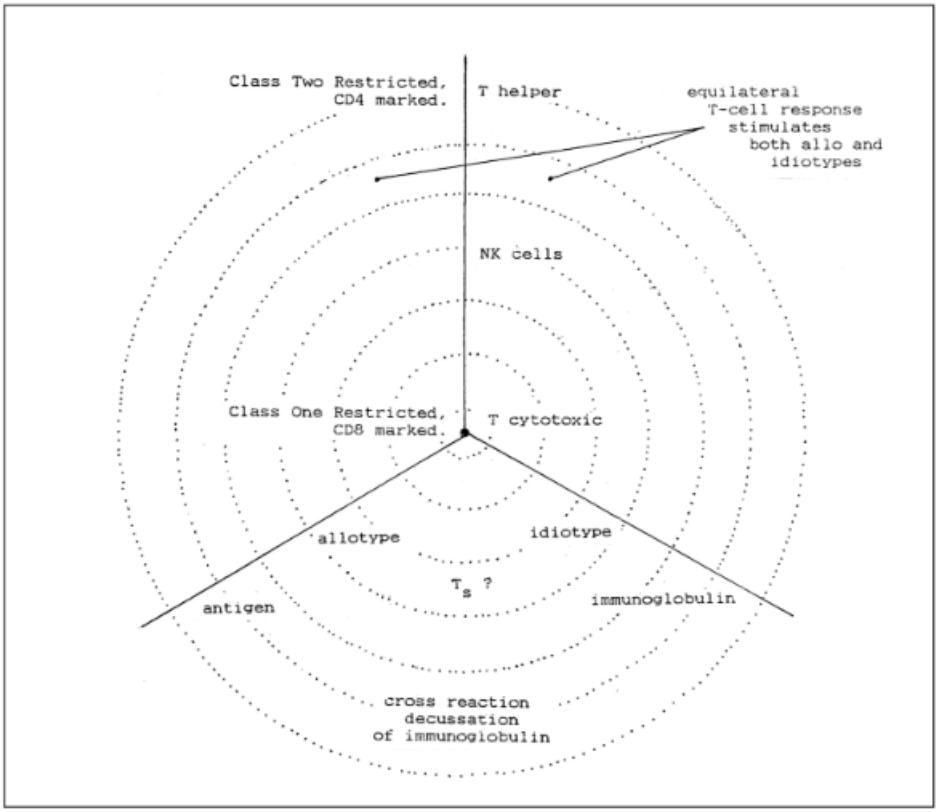

Figure 8.16: Bilateralism in the Immune Response

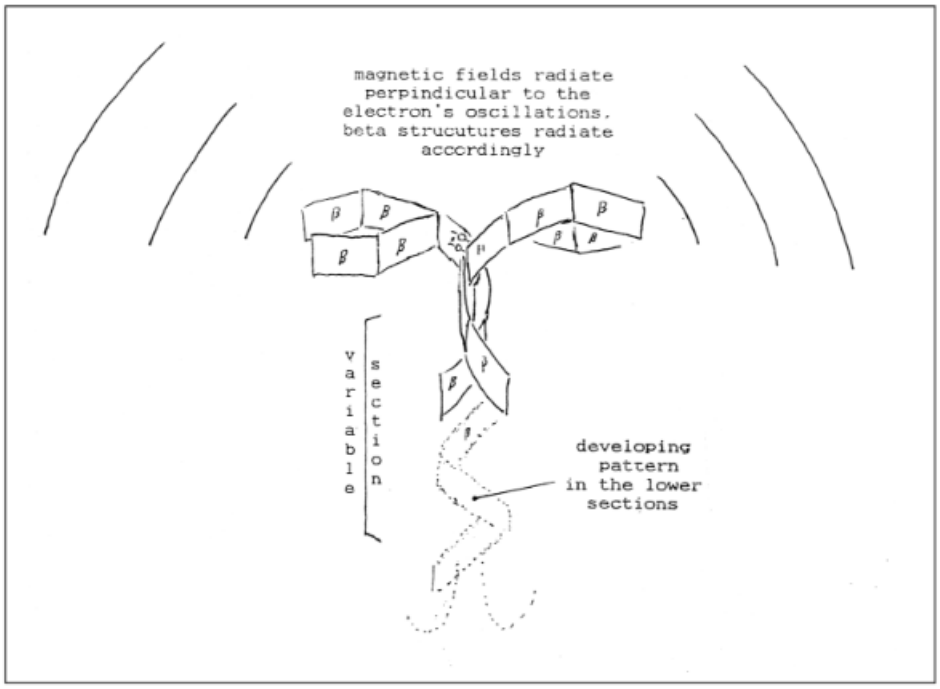

Figure 8.17: Immunoglobulin as an Oscillatory Molecule

munoglobulin molecule, and on variations in this molecule, as the mutated immuno-molecule is well studied and has a great deal of empirical information available. A diagram is tendered to show the foundations of the concepts next to be discussed. **Fig. 17**

Because of the overwhelming presence of antiparallel pleated sheets in the immunoglobulin framework, it it is reasonable to classify it as being a general oscillatory molecule whose behavior is influenced by the nature of the bonds it obtains with its receptor antigen. To analyze these bonding energetics, we must first understand the nature of affinity bonding. First, the R-groups present on the interactive part of the antigen are those R-groups whose charge structure is hydrophilic in nature. This means each R-group has a negative and positive charge in most instances. These hydrophilic properties allow the antigen to interact with water molecules, and this allows the spatial transmission of radiological signals as represented by the perpendicularly oriented s-energetics.

In concerns of antigen bonding, the antiparallel pleated sheet, while being energetically oscillating, is not equilaterally so on both sides of the structure. On one side of the sheet, one system of

R-group sharing exists, and on the other side, another system of R-group sharing exists. The oscillatory mechanism itself exists between these sheets and perpendicular to the major axis of the immuno-peptide in question. Alterations in energetic patterns, as caused by the bonding of a peptide to a pleated sheet, causes an alignment with the energetics of the R-groups on one side of the sheet, and this accentuates one oscillatory mechanism down through the molecule. Hence energy is transmitted. **Fig. 18**

In the binding of antigen to immunoglobulin, the immunoglobulin plays its attractive part both by the transmission of an encompassing signal which appears on the outside of the light and heavy pleated sheets, and by a magnetic evacuation, or "hole" which originates inside the clasping area. As guided by the immunoglobulin's external energetics, the immunoglobulin's internal radiological evacuation and the antigen's radiological presence align, hence causing the attraction of the two together. The affinity bonding which results is hard to perceive, but I would suggests it exists not as a resolute R-bond to R-bond interconnection, but as a tri-R-bond tiering of individual hydrophilic charges, and their respective energetics. In this manner a margin of misalignment can and could be tolerated.

The transfer of energy towards the center of the immunoglobulin molecule after antigen binding is itself the precipitator of other immunological events. It apparently allows the agglutination of the immunoglobulin into a larger framework, and this, with the apparent intensification of energy, allows the emission of the radiographic signals from the entity of the complex. There are some difficulties in explaining the dynamics of this, but if the reader notes how the initiation of energy which transfers through the immunoglobulin molecule occurs equilaterally and on both sides of the molecule, then it is possible to show the whole oscillating structure as being intensified by the antigen-immunoglobulin bonding. Moreover, the law of the disassociation of energy states that energy must be released from the structure when the bonding occurs. We can therefore say immunoglobulin agglutination itself is the result of the oscillation harmonics which are incipient in larger assertions of antiparallel pleated sheet structure. These oscillations must rhythmically phase shift electrons not only to allow formation of the agglutination complex, but also to give the formed complex the strength it needs to attract, bond, and stimulate the appropriate cytotoxic or complement producing cell.

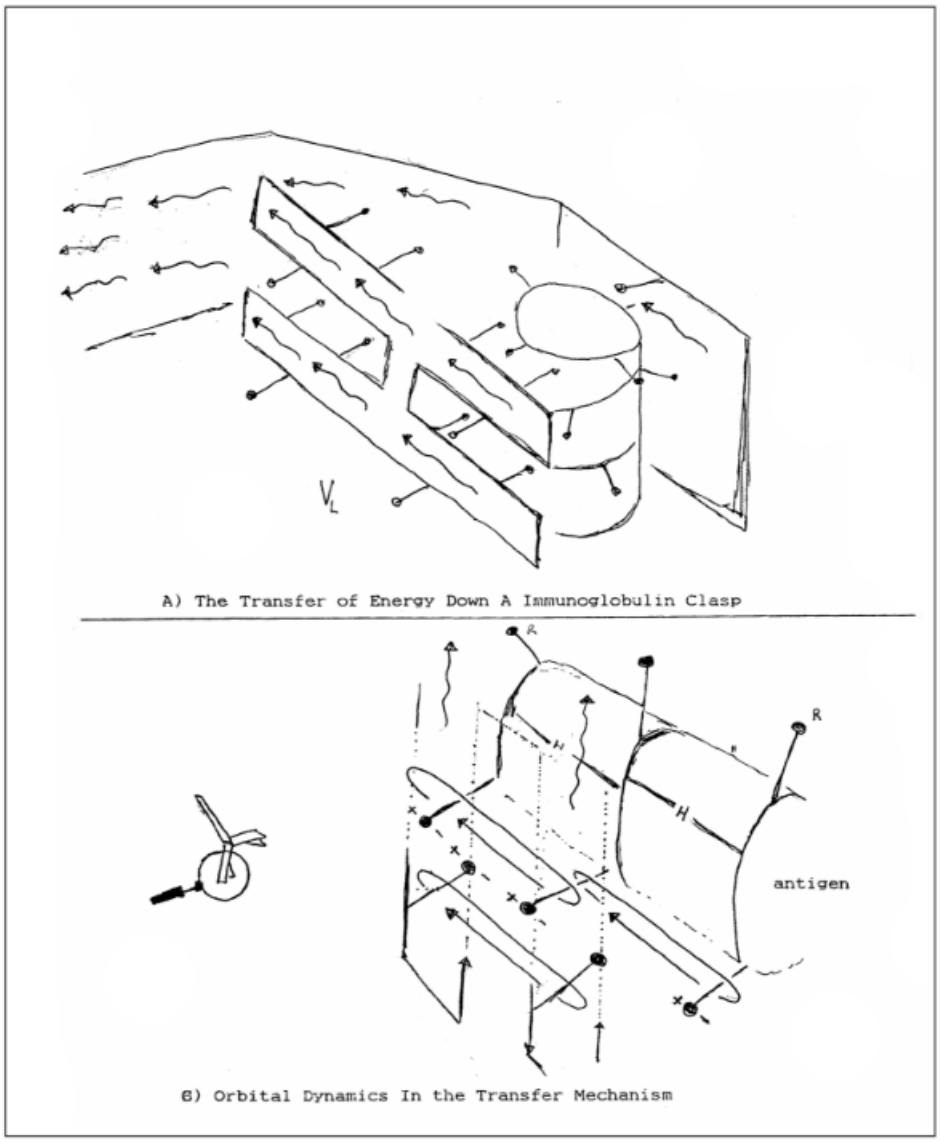

Figure 8.18: Intra-molecular Tuning and Tri-R Group Affinity Bonding

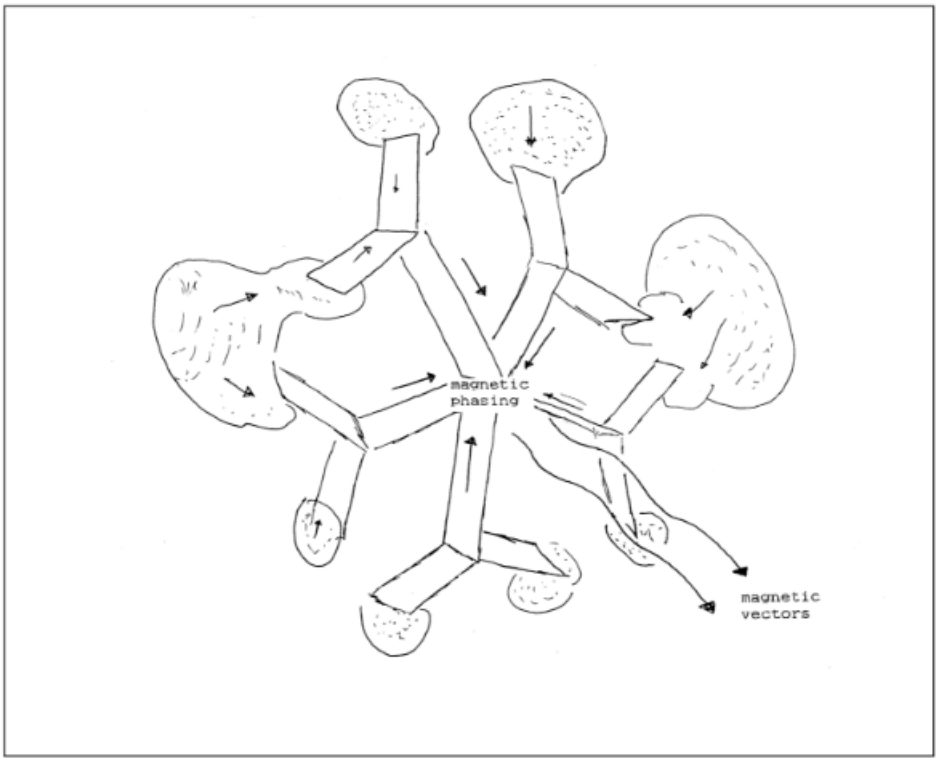

Figure 8.19: Radiological Patterns in the Agglutinated Framework

By knowing how immunoglobulin molecules respond to the reception of their antigen component, we can establish a basis for the study of how membrane surface proteins, such as subclassifications of immunoglobulin, elicit alterations in the cell's respiration, RNA expression, and replication. In this, we know some things about transmembrane type immunoglobulin. First, it stimulates RNA activity: This can be accomplished only by oscillating electromagnetic phenomena, according to both previous study and immunoglobulin analysis. Secondly, it encourages mitogenic activity: The vectors of the magnetic stimulation in a cell must be in concert with the vectors necessary to precipitate nuclear shielding, polarization, and DNA replication. Thirdly, it allows these two concepts to be in concert with each other: Together, they elicit the activities peculiar to the B lymphocyte.

Complicating immunoglobulin influence is how other membrane proteins have hormone reception activity occurring. This influence appears to be mainly caused by thymus lymphocytes. They seek to lessen, to accentuate, or to subtlety altered the conditions under which the immunoglobulin-antigen interaction influence the cell. They might delay or speed the mitogenic behavior, they might subtlety alter DNA availability, or they may cause a class switching to occur. They are sub-text on the primary reaction however, and to this end, the next diagram examines the spatial constituents of the basic reactions.

Exploring the mechanics of transmembrane proteins turns us back an area which is without literature. This lack is important because of the impasse it causes in molecular biology. Moreover, the physics of the thymus lymphocyte itself is largely dependent on the energizing of its transmembrane molecules, and so, our study in immunology is under duress. But, as the next chapter explores, the incorporation of logical concepts into an Aristotelian type of classification system will give us a basic system to classify aspects of immunology and membrane based pharmacology today.

8.7 Radiological Patterns In Treatment

In order to develop a theory of membrane based pharmacology, we must have a specific understanding of the various cations involved in the transmission of energy between the membrane, the mitochondria, and the nuclear core. These cations, or more specifically, the changing of the availability of these cations, is many times the

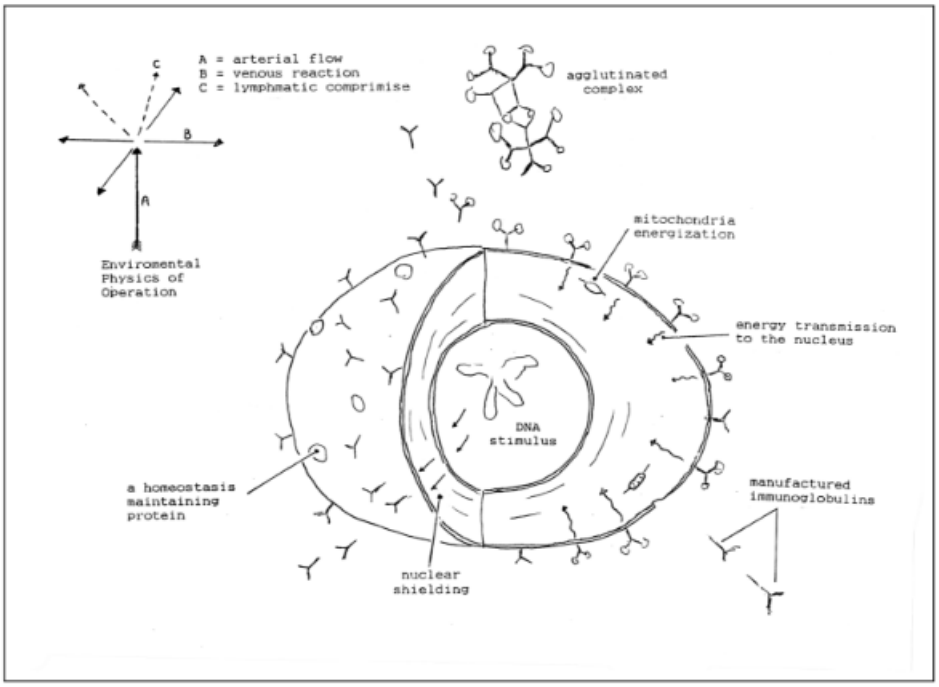

Figure 8.20: Bonding Based Alterations in the Energetics of the Cytoplasm

prime operational procedure of an energized cell membrane protein. Therein, they form one classification of membrane receptor, namely an ion adjustor. The other classification of membrane proteins, in so much as they interact with the previously described cationic availability, may be called cytoplasmic energy alternating. These two classifications exist within sub-text of the actual physical environment of a cell's differentiation, of course.

The organic cations may be graded according to structural criterion as based on firstly, percentage charge, e.g., a function of electron loss, secondly, on the degree of linearity of the magnetic content, and thirdly, on the spatial relationships of the electron content to the magnetic content. In the first criterion,percentage of charge, a table of dominance can be established: Therein, Mg^{++} is first, with a charge of about sixteen percent, and Fe^{+++} is second, with a charge of about twelve percent. Third is Ca^{++} with a charge of ten percent. Fourth is Na^{+} with a charge of about nine percent, and last is K^{+} with a charge of about five percent. In terms of the second criterion, that of magnetic linearity, only the iron atom, the calcium atom, and the magnesium atom, can be considered valid: The magnesium and calcium atoms both have additional line bonds of two protons in length, and the iron atom has a predominate line bond structure from which the ionization occurs. To be able to visualize this, and to establish the third criterion which exist between the electron count and the magnetic linearity, the following diagram is offered. **Fig. 21**

Conclusions about organic cations can be drawn from the above observations and discussions. First, the ferrous ion exhibits a magnetic pattern which is linear to its electron structure. Secondly, calcium and magnesium exhibit a magnetic structure which is perpendicular to its overall electrical structure, and thirdly, the potassium's and the sodium's magnetic structure is nonspecific, or very nearly so, with regards to its electrical structure.

The significance of cationic peculiarities to the cell is multi-fold. First, the magnetic-electrical linearity and the high charge of the ferrous ion dominate in the electron transport mechanism of the mitochondria. Second, the magnesium ion is shown to be too low in electron count for its magnetic intensity, and this precludes it from most operations in the cellular environment. Third, calcium itself, though of the same class as magnesium, is not like magnesium. Its "percentage charge" is comparable to the iron or the sodium charge. This allows it to "fit in" during cellular function. Fourth, the

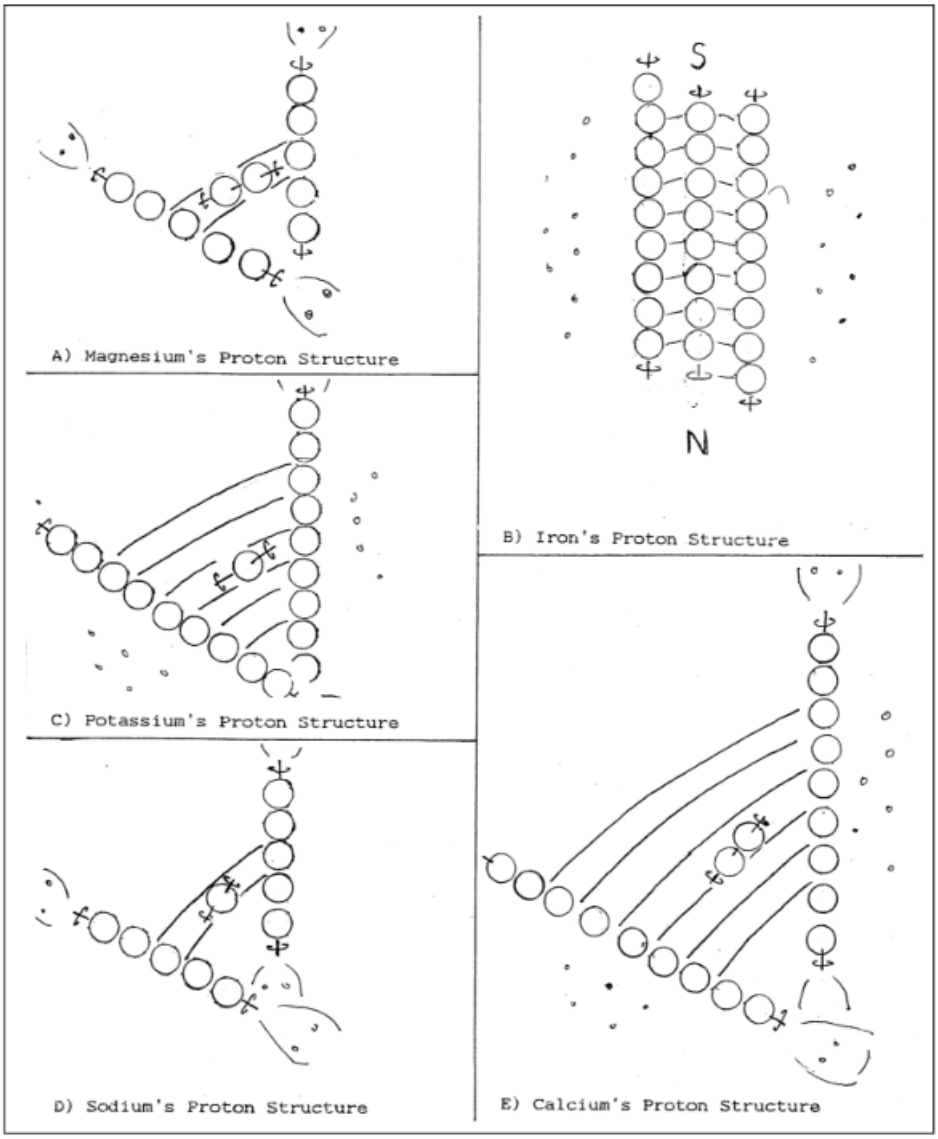

Figure 8.21: Magnetic Patterns in Cationic Nuclei

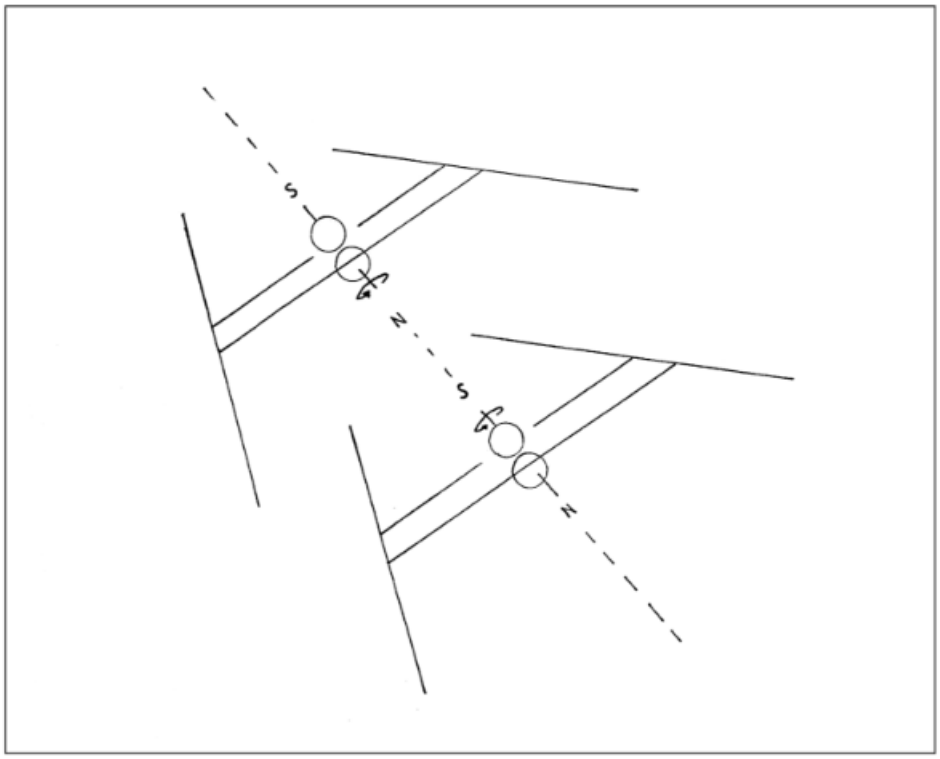

Figure 8.22: Radiological Interactions Between Calcium Ions

potassium ion, the most sedate of ions, has an electron count similar to a calcium ion, and a magnetic charge the same as the sodium ion: It appears to act as an intermediary between the two. These small differences between the cations lead to major differences in the cell.

In the function of the T-lymphocyte, it has been shown its receptors are of the "ion adjustor" class. Upon activation, these allow the dispersion of calcium ions into the cytoplasm. What possible mitogenic and/or RNA stimulative function can a calcium ion have over its counterpoint, the sodium ion? The following diagram shows what is involved. **Fig. 23**

As seen above, the calcium ion is capable of causing a line of magnetic linearity to exist between it and its neighboring ions. This, when present in a cell as a result of biochemical processes associated with energized membrane receptors, can cause or enhance the radiographic shielding of the cell, or elicit RNA synthesis. The vectors of orientation of the ions is what determines this diversity

in function. When the calcium ions are cytoplasmically orientated in such a way that their s-energetics can cause enhanced delivery of oscillating signals to the cell's nucleus, then RNA synthesis activities are produced. When the ions are turned, when these s-energetics are able to shield the DNA from oscillating conditions, the cell is then polarizable, and therefore mitogenic activity can occur. Interestingly, in mitogenic activity, the mitochondria can, with its unique bipolar linearity as supplied by its iron ions, disperse according to the general magnetic field more so than to the cell's negatively charged polarized area.

From the last paragraph, it was shown membrane protein function which is not involved in an exclusive ion adjusting or its related protein translocating classification, is involved in the energetic shaping of the cytoplasm classification. Now, while the ion adjusting classification is an evident subclassification, the cytoplasmic energy alternating classification is not. We have already shown it to be a part of two membrane geometry based subdominant classifications. These subclassifications are, relevant to the membrane, magnetic parallel, electrically perpendicular, and magnetic perpendicular, electrically parallel, in energy alteration. These subclassifications are again breakable into the idiosyncracies of their activity. These idiosyncracies concern the relative intensification and/or relaxation of each sub effect, and therein they form the operands which work not only in conjunction with the calcium ion, but also within context of the other cations, to elicit DNA stimulatory and mitogenic activity.

Because we can know the physics of cell behavior, so it is we must know the physics of altering the divergent cell's behavior. Which cannot be repaired through immunological means, must be repaired through human means. To this end, we have already explored the application of a magnetic energy whose purpose is to experimentally change or realign a certain intensity and/or oscillation of a magnetic pattern. We looked at ion based magnetic patterns in connection with the spinal cord, and at hematological magnetic patterns in connection with kidney texture, pancreas shape, and liver mitochondria. Therein, we established the basis of a new form of medical study. This form of study is now extendable to the accentuation or clarification of immune system dynamics, and to the manipulation of adipose metabolism. The usefulness of the first technique is obvious, and the usefulness of the second is also obvious for metabolic imbalances of the adipose cell type,

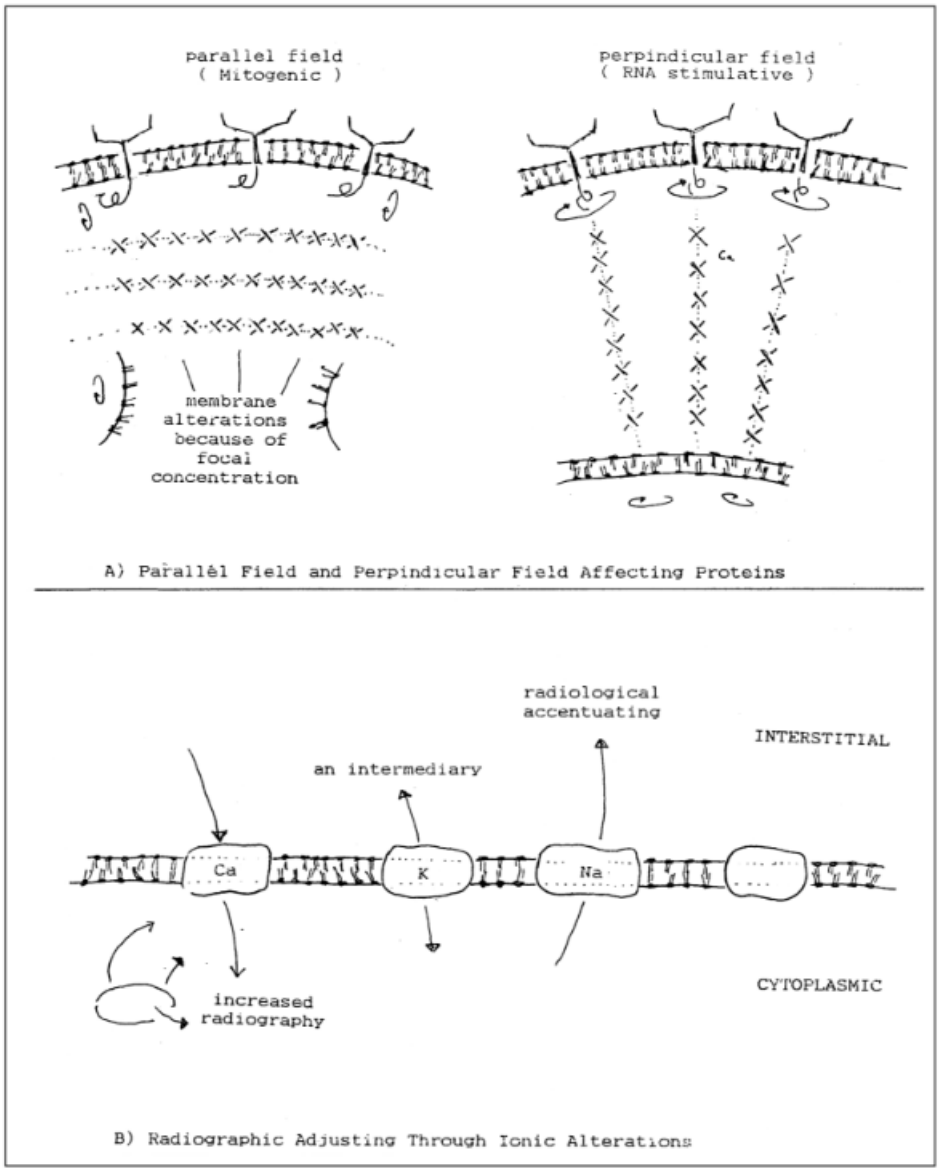

Figure 8.23: Membrane Receptors and Radiographic Functions

like baldness or obesity. But herein, the dangerousness of these procedures, because of the alignment they have with physiological patterns of differentiation energy, must be noted.

In immunology, a notable problem is leukemia, a situation in which mutative genes from the immunoglobulin's and the T-cell receptor's variable regions become intermixed. Once established, they become a divergent cell line. The repair of this immune dysfunction, in so far as elimination of the physics which cause the differentiation of the divergent cell line goes, may be achieved physically through the normalization of thymic and marrow magnetic patterns. This may be a subtle procedure because the repair may require the stimulation or relaxation of a particular subclassified magneticore or staticore cell line. This kind of specific stimulation can be achieved through the introduction of an adjuvant, e.g., an iron, magnesium or chlorine compound, and/or a membrane actuator, which can be used to alter the distinction, as in the degree of differentiation, between the magneticore and staticore line. This accomplished, experimentation in the previously mentioned ionization chamber may be used to reestablish normal differentiation patterns. This may be described as an realignment of DNA availability. Whether this adjuvant method is needed is dependent on the success of the physical methods alone.

In mentioning adipose tissue, I am mentioning a cell type which co-differentiates a projecting representation of the magneticore line, and with an anatomical domination of the surrounding anionic staticore line. Therefore, in numerical increases of the adipose cell type, the conditions of anionicity will increase, as will the intensity or quantity of magnetic projections which are their counterparts. The opposite logic also applies in saying if there is an decrease in anionicity, then a decrease in the quantity or intensity of the magnetic projections must also occur. The magnetics is dependent on the statics on this side of the differentiation spectrum. Correlating this with empirical data, we can see how a sterol can cause an alteration in surface fat staticore layers, and this can thereby induce multifaceted magenticore effects, such as breast enlargement, secondary hair growth or loss, and so forth, in different anatomical areas. To alter this activity, a local application of magnetic energy which reverses or intensifies the in vivo effects of these sterols, be those effects sterol fat negating (anionic weakening) or fat increasing (anionic intoxicating) in context of a physiological area. The "fit" of the sterol is all important. I should note here this area is

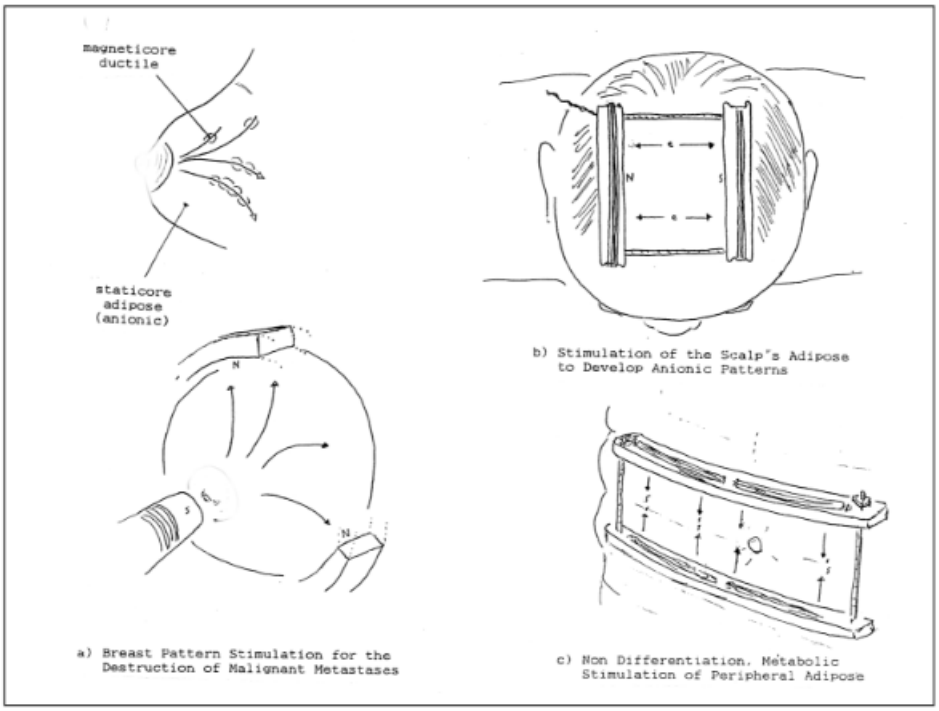

Figure 8.24: Altering Electrolyte Balance Through Electromagnetic Induction

highly speculative and untested.

Magnetic stimulation is interesting, but the work of this book has shown pharmaceuticals to be miniature methods of altering physical response in certain areas of the body. Therein, the pharmaceuticals operated with receptors or favorable environments to alter the physics of a cell. Indirectly, they may affect the staticore or magneticore co-cells which lay in close proximity. The point is the reciprocal logic of cell differentiation results in two cell types which are in close proximity physically, but with very different mechanics in terms of pharmaceutical reactions. While it is possible to stimulate one cell line without upsetting the other line, the effect of the pharmaceutical is often to expose the staticore cell lineage to magnetic oscillations, or to expose a magneticore to static charge, and to thereby indirectly alter the energetics of the entire differentiation area. The exact biochemical process used to accomplish these changes are difficult to understand, but in the immunological example of T-cell receptors, we see the alteration is accomplished through the "process" subclassification, namely

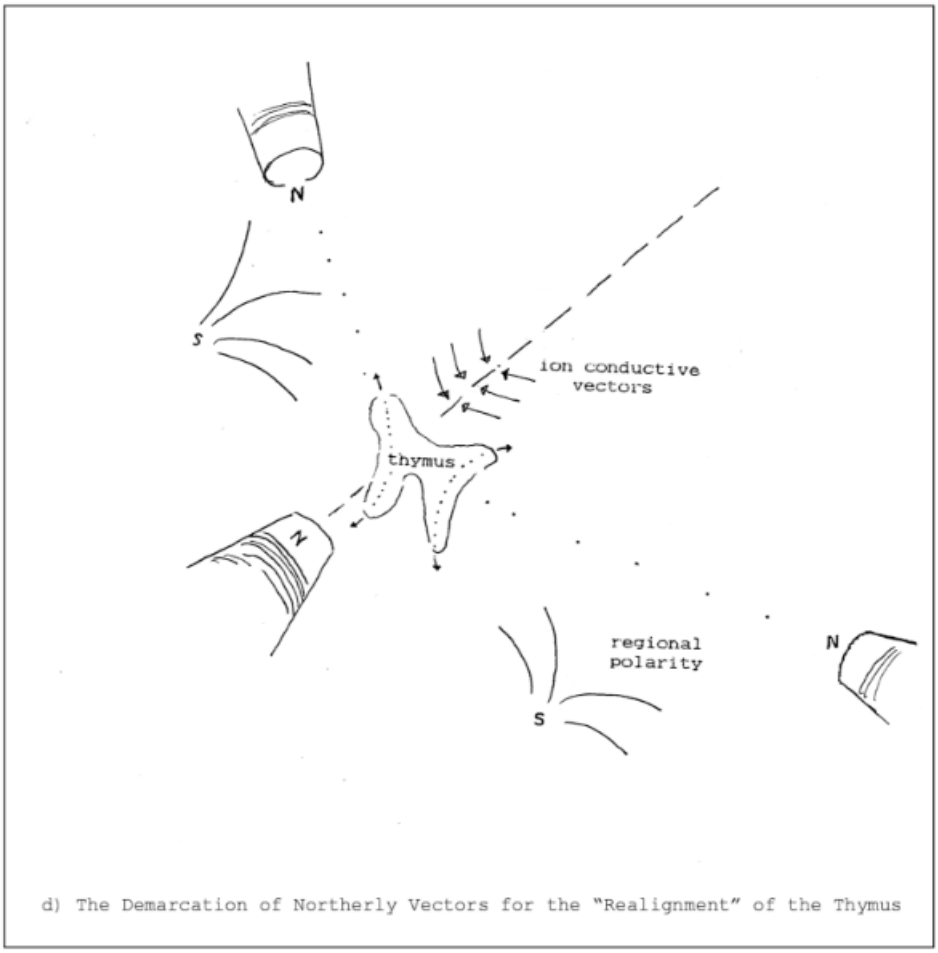

Figure 8.25: Altering Immune Activity Through Electromagnetic Induction

ion adjustment. How does this affect the surrounding magneticore tissue? So far, it is apparent we have transitional definitions of magneticore and staticore from which our study of pharmaceutical actuators or blockers can proceed. However, the logic dichotomies of the atlas equation suggest, for example, if the cytoplasmic release of calcium ions causes RNA and/or mitogenic activity in a T-cell, then the release of the ions into an erythrocyte producing mechanism will cause RNA synthesis and DNA activity to cease. In this case it would interfere with the polar energetics of the iron heme production, and so forth. With this basic logic in mind, I would like the reader to consider the following diagram (**Fig. 26**) which tries to establish a classification of membrane protein actuators. Ultimately it is a method whereby pharmaceutical action can be assigned.

I would like to close by saying I hope prudence and caution are your hallmarks in experimenting with the techniques outlined herein. Their newness is the essence of their danger.

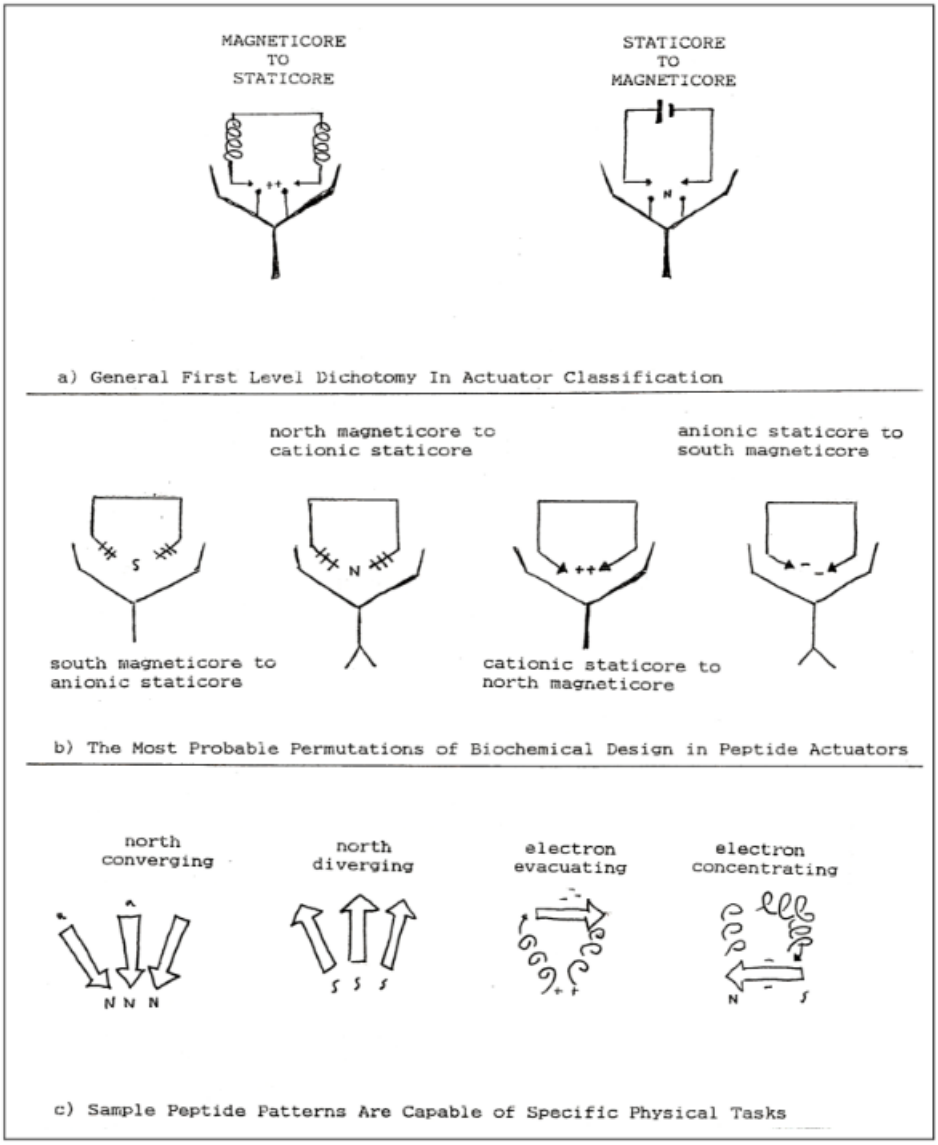

Figure 8.26: Cell Membrane Protein Actuators

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